Financial Study for the
TENMILE CREEK WATER TREATMENT PLANT PROJECT

Prepared for

Prepared by

CH2M HILL

May 1986

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Financial Study for the

TENMILE CREEK WATER TREATMENT PLANT PROJECT

Prepared for
City of Helena, Montana

by
CH2M HILL, INC.
Boise, Idaho

May 1986

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Helena, Montana 59601

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

In this report we have examined 12 alternative financing plans for the Tenmile Creek Water Treatment Plant Project. Each of the financing alternatives for the Tenmile Creek Water Treatment Plant Project analyzed in this study uses--either individually or in combination--water revenue bonds, general obligation bonds, a Montana Department of Natural Resource and Conservation (DNRC) Loan, a DNRC grant, and/or a Federal Community Development Block Grant to finance the proposed project. In addition, since two alternatives assume that the project will not be constructed, this allows comparisons of the resulting rates and typical bills under each financing alternative with the water rates that would be in effect if the project was not constructed.

The alternatives are numbered 1 through 6, with A and B options for each numbered alternative, for a total of 12 alternatives. All of the "A" alternatives assume that rates will increase each year as needed to meet the utility's revenue requirements from rates in that year. We also assume that the water rates will not be reduced in response to lower revenue requirements from rates. All of the "B" alternatives assume that rates will increase in FY1987 sufficiently to meet the utility's revenue requirements and other financial commitments (debt service coverage requirements) throughout the study period (FY1991).

The financing alternatives considered in ths analysis were:

Alternatives	
1A and 1B	No Build
2A and 2B	Revenue Bonds - No Grants
3A and 3B	Revenue Bonds With Grants
4A and 4B	State Loan - No Subsidy
5A and 5B	State Loan With Subsidy
6A and 6B	State Loan - G.O. Bond

STUDY RESULTS

Based on our analysis, the order of each alternative from lowest to highest cost assuming annual rate increases (not including Alternative 1) would be:

Alternative 5 - Subsidized DNRC Loan
Alternative 6 - G. O. Bond
Alternative 3 - Revenue Bond With Grants
Alternative 4 - DNRC Loan No Subsidy
Alternative 2 - Revenue Bond No Grants

The order of these alternatives, assuming one rate increase in FY1987 for the entire period would be:

Alternative 6 - G. O. Bond
Alternative 5 - State Loan with Subsidy
Alternative 3 - Revenue Bond With Grants
Alternative 4 - DNRC Loan Without Subsidy
Alternative 2 - Revenue Bond Without Grants

A review of the analysis results indicates that the key factor in determining which alternative in the least cost to the City is the interest rate on the bond or loan. Conversations with DNRC staff indicate that it is possible that Helena could receive a 2 or 3 percent interest rate subsidy from the DNRC for a 5-year period. Issuing a self-supporting general obligation bond that is junior to the City's outstanding 1985 water system refunding revenue bonds presents several difficulties, including: having a bond election, making special arrangements for sale of this "unusual" type of bond, and most importantly, limiting the ability of the City to issue general obligation bonds for other purposes.

Receipt of federal or DNRC grants may also be difficult to obtain due to recent federal spending cutbacks and DNRC grant distribution regulations. The DNRC loan without an interest rate subsidy may or may not offer a better interest rate to the City than it can obtain in the bond market, but

it does offer lower selling costs and possibly a smaller debt reserve requirement than might be required if the City issued bonds.

RECOMMENDATIONS

We recommend that the City consider each of these alternatives in the approximate order from least to highest cost presented in this analysis. In evaluating Alternative 6, special consideration should be given to whether the City wishes to pledge its full faith and credit for this bond issue or not (i.e., issue a general obligation bond). The cost of applying for a subsidized loan or a state or federal grant appears to be quite small, and therefore is probably worth the effort even if the probability of receiving a grant or a subsidized loan is also small.

We also recommend, in accordance with the discussion of financing mechanisms presented in Appendix A, that the City: (1) review the method used to calculate water rates and consider adopting a cost-of-service framework as the basis for their calculation, and (2) discontinue use of the declining block rate structure and adopt a uniform volume charge for all water consumed beyond some minimum amount.

INTRODUCTION

Section 1
INTRODUCTION

AUTHORIZATION AND PURPOSE

In March 1985, the City of Helena, Montana authorized CH2M HILL to conduct a pilot plant and study, prepare a preliminary engineering report, and conduct a financial feasibility study of the Tenmile Creek Water Treatment Plant Project. The construction of a water treatment plant for the Tenmile water supply has been mandated by the State of Montana Department of Health and Environmental Sciences. The purpose of this report is to summarize the results of the financial feasibility portion of the study.

SCOPE

Technical memoranda prepared earlier as part of this project, and included in the appendices of this report, described various financing mechanisms and the calculation and use of system development charges for financing capital improvements. This report evaluates what impact some of these financing mechanisms would have on water rates and water bills of typical users if they were used to finance the proposed Tenmile Creek Water Treatment Plant Project.

This report covers the following:

- Description of the proposed project
- Anticipated construction costs
- Construction schedule
- Alternative financing mechanisms

- Assumptions underlying the analysis of each of the alternative financing mechanisms
- Impacts on rates and typical user bills of each of the alternative financing mechanisms
- Conclusions and recommendations regarding use of each of the alternative financing mechanisms

PROJECT DESCRIPTION

Section 2

PROJECT DESCRIPTION

INTRODUCTION

The results of the pilot plant study are presented in the Tenmile Creek Water Treatment Plant Pilot Study report, (CH2M HILL, February 1986). The results of the preliminary engineering analysis are presented in Preliminary Engineering Report for the Tenmile Creek Water Treatment Plant (CH2M HILL, March 1986).

The proposed Tenmile Creek Water Treatment Plant Project consists of four components:

1. Construction of the Tenmile Water Treatment Plant ($6,742,00)
2. Construction of a 33-inch diameter, 17,000-foot-long transmission pipeline ($2,132,000)
3. Corrosion protection on 16,800 feet of steel pipe within the highway right-of-way, and spot treatment of another 10,700 feet of steel pipe between the Tenmile Creek Water Treatment Plant and the highway right-of-way ($103,800)
4. Rehabilitation of Chessman Dam ($944,000)

The estimated total cost for the entire project is $9,922,000.

SCHEDULE

The proposed schedule for design, construction, and financing of the treatment plant and transmission pipeline is shown in Figure 2-1. For this analysis, we assumed that the schedule

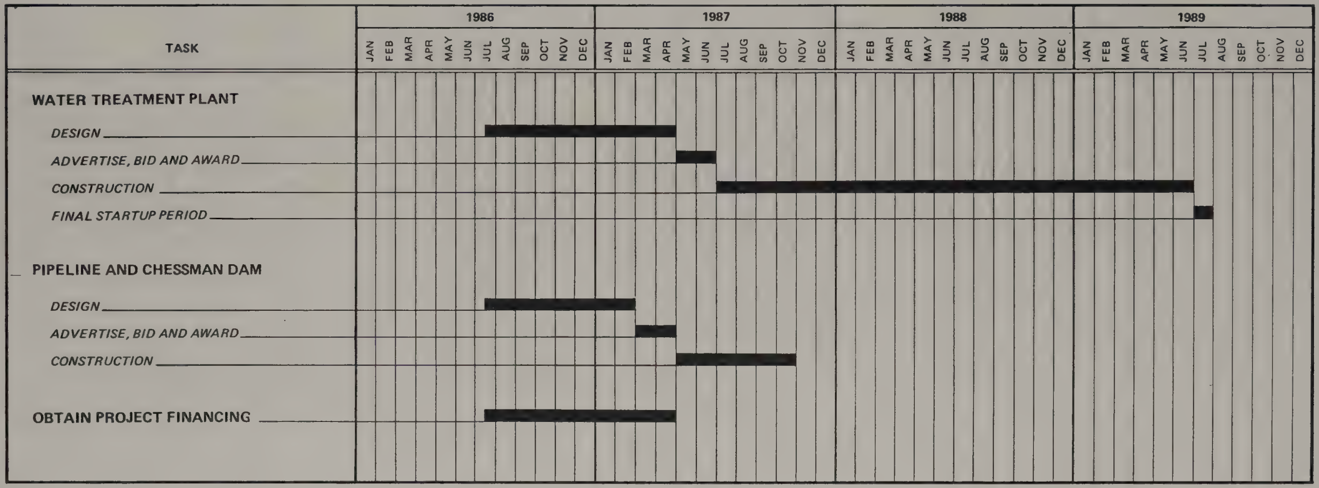

Figure 2–1
PRELIMINARY PROJECT SCHEDULE
TENMILE CREEK WATER TREATMENT PLANT
FINANCIAL STUDY
CITY OF HELENA, MONTANA

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for design, construction, and financing of the corrosion protection and Chessman Dam rehabilitation would follow the same schedule as that proposed for the transmission pipeline.

The proposed schedule shows that design of the treatment plant would begin in May 1986 and be completed in April 1987. The contract for construction of the project would then go out for bids in May and June, 1987, and construction would begin in July. Construction would be completed in June 1989, with plant startup scheduled for the beginning of FY1990 (July 1989).

The schedule for the transmission pipeline, corrosion protection, and Chessman Dam rehabilitation calls for design work on these projects to begin in May 1986. Design would be completed in 10 months, with bids taken in March and April, 1987. Construction on these projects would take approximately 6 months, beginning in May 1987.

According to the schedule for obtaining financing for these projects, work on the bond issue, loan application, or other project financing would begin in May 1986 and financing would be obtained by the beginning of May 1987.

COST ESTIMATE

The estimated design, construction, and legal and administrative costs associated with each of these projects, by year of expenditure, are shown in Table 2-1.[1] The cost estimates for the Tenmile Creek Water Treatment Plant, transmission pipeline, and corrosion protection assume a 5 percent

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[1] Preliminary Engineering Report for the Tenmile Creek Water Treatment Plant, CH2M HILL. March 1986.

Table 2-1
City of Helena
Tenmile Creek Water Treatment Plant Project
Capital Cost Estimate
Fiscal Years Ending June 30

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991	Project Totals
Tenmile Treatment Plant								
ngineering	$ 0	$ 58,500	$ 292,500	$ 187,000	$ 187,000	$ 0	$ 0	$ 725,000
onstruction	0	0	0	2,921,000	2,921,000	0	0	5,842,000
Legal/Administrative	0	29,167	145,833	0	0	0	0	175,000
Transmission Pipeline								
ngineering	0	22,600	115,400	50,000	0	0	0	188,000
onstruction	0	0	629,000	1,258,000	0	0	0	1,887,000
egal/Administrative	0	9,500	47,500	0	0	0	0	57,000
Pipeline Corrosion Protection								
Engineering	0	2,284	11,663	5,053	0	0	0	19,000
onstruction	0	0	27,433	54,867	0	0	0	82,300
egal/Administrative	0	417	2,083	0	0	0	0	2,500
Chessman Dam Repairs								
Engineering	0	13,534	69,105	29,942	0	0	0	112,581
onstruction	0	0	267,965	535,929	0	0	0	803,894
egal/Administrative	0	4,600	22,900	0	0	0	0	27,500
Total Tenmile Project[1]	$0	$140,601	$1,631,383	$5,041,791	$3,108,000	$0	$0	$9,921,774
lacement and epreciation	245,219	304,819	304,819	400,000	400,000	400,000	400,000	2,454,857
Other CIP	0	830,031	140,601	0	0	0	0	970,632
Other CIP - SDC Funds	0	0	208,980	208,980	208,980	208,980	208,980	1,044,900
al Capital Improvements	$245,219	$1,275,451	$2,285,783	$5,650,771	$3,716,980	$608,980	$208,980	$14,392,163

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es not include 3 percent bond sale financing costs. Financing costs are included in determining the total bond issue size.

inflation rate between March 1986 and July 1987. The cost estimate for the Chessman Dam rehabilitation, which was prepared by Morrison-Maierle, Inc.,[2] assumes a 3 percent inflation rate in 1986 and a 6 percent inflation rate for 1987. The cost estimate for the Chessman Dam rehabilitation was also adjusted to include 3 percent legal and administrative costs that did not appear to be included in the Morrison-Maierle cost estimate. The table shows that nearly half of the total cost of these projects will be spent in FY1988. In addition to these projects, other capital improvement expenditures and replacement and depreciation expenditures are expected to increase total capital improvement expenditures for FY1988 to more than $5,650,000. Total capital improvement costs over the 6-year study period amount to approximately $14,390,000.

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[2] Supplemental Report Geotechnical and Preliminary Engineering: Chessman Dam Rehabilitation Investigation, Morrison-Maierle, Inc. December 1985.

FINANCING ALTERNATIVES

Section 3
FINANCING ALTERNATIVES

INTRODUCTION

In this section of the report 12 alternative financing plans for the Tenmile Creek Water Treatment Plant Project are examined. The section begins with a description of each financing alternative, followed by a description of the assumptions underlying our analysis of each of these alternatives. The resulting impacts on water rates and on the monthly water bills of some typical users under each of these financing alternatives are then estimated.

FINANCING ALTERNATIVES

Each of the financing alternatives for the Tenmile Creek Water Treatment Plant Project analyzed in this study uses--either individually or in combination--water revenue bonds, general obligation bonds, a Montana Department of Natural Resource and Conservation (DNRC) Loan, a DNRC grant, and/or a Federal Community Development Block Grant to finance the proposed project. In addition, since two alternatives assume that the project will not be constructed, this allows comparisons of the resulting rates and typical bills under each financing alternative with the water rates that would be in effect if the project was not constructed.

The alternatives are numbered 1 through 6, with A and B options for each numbered alternative, for a total of 12 alternatives. All of the "A" alternatives assume that rates will increase each year as needed to meet the utility's revenue requirements from rates in that year. We also assume that the water rates will not be reduced in response to lower revenue requirements from rates. All of the "B"

alternatives assume that rates will increase in FY1987 sufficiently to meet the utility's revenue requirements and other financial commitments (debt service coverage requirements) throughout the study period (FY1991).

The financing alternatives considered in ths analysis were:

Alternatives	
1A and 1B	No Build
2A and 2B	Revenue Bonds - No Grants
3A and 3B	Revenue Bonds With Grants
4A and 4B	State Loan - No Subsidy
5A and 5B	State Loan With Subsidy
6A and 6B	State Loan - G.O. Bond

The following paragraphs describe each alternative in more detail.

ALTERNATIVES 1A AND 1B

Alternatives 1A and 1B are the no-build alternatives. These alternatives assume that the Tenmile Creek Water Treatment Plant and associated transmission pipeline, corrosion protection, and Chessman Dam rehabilitation will not be constructed. All other planned capital improvement projects and replacement and depreciation account expenditures will be constructed or purchased, as shown in Table 2-1.

ALTERNATIVES 2A AND 2B

Alternatives 2A and 2B assume that all of the costs of the Tenmile Creek Water Treatment Plant Project will be financed through the sale of water revenue bonds, from the remaining proceeds of the 1985 Water System Refunding Revenue Bonds, and from retained operating funds ($200,000). This $200,000 of retained operating funds are water operating funds over and above what the City needs to meet bond reserve requirements and other cash reserve needs.

For this analysis, we assumed that the revenue bonds would be sold under the following conditions:

- Bonds would be issued in FY1987.
- First full year of debt service would be FY1989, with a half-year's principal and interest payment made in FY1988.
- Term of bonds would be 20 years.
- Interest rate would be 8.5 percent.
- Total annual principal and interest payments would be the same over the 20-year repayment period.
- Debt reserve would equal one year's annual principal and interest payment.
- Bond discount would be 3 percent.
- Bond selling costs would be $60,000.
- Bond coverage requirements would be 125 percent.
- Total bond issue size would be approximately $10,675,000.

ALTERNATIVES 3A AND 3B

These alternatives assume that the City will sell revenue bonds and, in addition, will receive a $100,000 grant from the DNRC and a $350,000 grant from the Federal Community Development Block Grant Program. Receipt of these grants reduces the total bond issue size to $10,156,000. All other bond issue assumptions are the same as for Alternatives 2A and 2B.

ALTERNATIVES 4A AND 4B

Alternatives 4A and 4B assume that the City receives a loan from the DNRC instead of selling revenue bonds to finance the project. These alternatives further assume that the City does not receive any grants or interest subsidies from the State of Montana. We assumed the following three differences between the revenue bond issue (Alternatives 2A and 2B) and the DNRC loan program (Alternatives 4A and 4B)

- Selling costs under the DNRC loan program are only $2,000.
- Debt reserve is equal to one-half year's principal and interest payment.
- Total loan size is $10,014,000.

A potential problem with these alternatives is that the DNRC loan funds will not be available until probably September 1987. Thus, the City will need an interim loan until those funds are available. We assumed for this analysis that interim financing would be obtained at an interest rate of 5 percent and an associated bond selling cost of $10,000. Thus the need for interim financing results in some additional interest expenses and bond selling cost in May through August of 1987, which is included in the revenue requirements for FY1987 and FY1988.

ALTERNATIVES 5A AND 5B

Alternatives 5A and 5B are the same as Alternatives 4A and 4B, respectively, except that these alternatives assume that the City receives a 2 percent interest subsidy from the DNRC. The DNRC provides 5-year interest subsidies of 2, 3, and 4 percent, depending on how high the utility's rates,

would need to be without the interest subsidy and the per capita income level of the community. Last year, the DNRC provided 4 percent interest subsidies below their bond sale interest rates for communities whose single-family residential monthly water bills would be more than $18 per month. The DNRC provided 3 percent subsidies for communities whose monthly water bills for single-family residential users would be between $14 and $18 per month, and 2 percent interest subsidies for communities whose water bills would fall between $12 and $14 per month. We assumed a 2 percent interest subsidy based on the anticipated water rates under the annual rate increase, unsubsidized state loan alternative (Alternative 4A). This assumption does not necessarily mean that the City would be able to get a 2 percent interest subsidy or that it would not be able to get more than a 2 percent interest subsidy from the DNRC in FY1987. Under this financing option, rates would likely need to be increased significantly at the end of the 5-year interest rate subsidy period.

ALTERNATIVES 6A AND 6B

These alternatives assume that the City sells self-supporting general obligation bonds. Self-supporting general obligation bonds are bonds in which revenues from another source (in this case water system revenues) are used to repay the bonds, but if those funds are insufficient, then property tax revenues must pay the difference. We further assumed that these bonds would be at parity with the City's other outstanding general obligation bonds rather than at parity with the City's currently outstanding water revenue bonds. Consequently, the debt service on these bonds would not need to be included in the coverage calculation for the existing bond issue. Since these are general obligation bonds, we assumed that the coverage requirement would be 100 percent of the total debt service on both the existing and proposed bond issue.

This would be an unusual bond issue, and likely could only be arranged by special agreement between the City and a bond bank such as that run by the DNRC or other major bond buyer. Because these are general obligation bonds, the City would need to have a bond election.

Since these were general obligation bonds, we further assumed that the interest rate on these bonds would be 7.5 percent, that the debt reserve requirement was equal to one-half year's principal and interest payment, and that total selling costs, including the bond election costs, would be $70,000. If the City sold these general obligation bonds to the DNRC, they would probably not receive any lower interest rate under this option than they would if they sold revenue bonds to the State instead.

A major consideration regarding this financing alternative is the impact that using the City's general obligation bonding capacity for financing these improvements would have on the City's capability to finance other improvements. The City has a general obligation bond authorization limitation of $6 million. The City can issue water and sewer bonds up to three times the limitation ($18 million). However, the City would not be able to issue any additional general obligation debt until the outstanding principal drops below the $6 million general obligation debt limitation. Thus, assuming that a general obligation bond were issued in accordance with the assumptions of this analysis, the City would not be able to issue additional general obligation debt for 11 years, or until 1998, provided it did not prepay or refinance this bond issue.

Table 3-1 shows the calculation of the total bond issue size for each financing option.

Table 3-1
City of Helena
Bond Issue Size Calculations

	Financing Alternative (Options A and B)				
	2	3	4	5	6
Bond Proceeds	$9,195,838	$8,745,838	$9,195,838	$9,195,838	$4,195,838
Debt Service Reserve	1,098,590	1,045,179	515,274	515,274	519,084
Underwriters Cost	320,240	304,671	300,406	300,406	302,626
Selling Cost	60,000	60,000	2,000	2,000	70,000
Total Bond Issue Size	$10,674,668	10,155,688	10,013,518	10,013,518	10,087,548
Interest Rate	8.5%	8.5%	8.5%	6.5%	7.5%
Annual Debt Service (20 years)	$1,128,003	$1,073,161	$1,058,138	$908,791	$989,510

STUDY ASSUMPTIONS

The following assumptions were used in the analysis of the impact on water rates and typical user bills of each of the financing alternatives:

USER CHARACTERISTICS

- The number of water customers will increase by 71 residential accounts and 22 commercial accounts annually.

- The distribution of water customers by meter size will follow the current distribution (Table 3-2 shows the projected number of water system customers by meter size).

- Total water consumption will increase by the same percentage as the increase in the total number of customers.

- Water consumption by rate block will maintain the following pattern:

  - 12 percent of total consumption will be in the 1st rate block.

  - 57 percent of total consumption will be in the 2nd rate block.

  - 31 percent of total consumption will be in the 3rd rate block (Table 3-3 shows projected total water consumption by rate block).

OPERATING COSTS

- System operating costs, as recommended by City staff, will increase by 3 percent annually except

Table 3-2
City of Helena
Forecast System Customers By Meter Size
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Meter Size							
5/8 & 3/4"	7,734	7,820	7,906	7,992	8,078	8,164	8,251
1"	323	327	330	334	337	341	345
1-1/2"	100	101	102	103	104	106	107
2"	101	102	103	104	105	107	108
3"	27	27	28	28	28	29	29
4"	21	21	21	22	22	22	22
6"	2	2	2	2	2	2	2
8"	2	2	2	2	2	2	2
Subtotal	8,310	8,403	8,495	8,588	8,680	8,773	8,865
Fire Lines & Sprinklers	120	120	120	120	120	120	120
Unused	0	0	0	0	0	0	0
System Customer Forecast	8,430	8,523	8,615	8,708	8,800	8,893	8,985
Year-to-Year Growth (%)	--	1.10%	1.09%	1.07%	1.06%	1.05%	1.04%

Table 3-3
City of Helena
Forecast Metered Water Sales
Hundreds of Cubic Feet
Fiscal Years Ending June 30th

Rate Block	1985	Actual 1986	Current 1987	1988	1989	1990	1991
1 - (0-5 HCF)	189,680	191,761	193,843	195,924	198,005	200,087	202,168
2 - (Next 95 HCF)	900,878	910,763	920,648	930,533	940,418	950,303	960,188
3 - All Additional	489,951	495,327	500,703	506,079	511,455	516,831	522,208
Total Consumption	1,580,509	1,597,851	1,615,194	1,632,536	1,649,879	1,667,221	1,684,564
Year-to-Year Growth	NA	1.10%	1.09%	1.07%	1.06%	1.05%	1.04%

for utility charges, which are forecast to increase in accordance with Montana Power planned rate increases of:

7.1 percent in August of 1986
17.0 percent in August of 1987
14.0 percent in August of 1988
10.0 percent in August of 1989

- System operating costs will decrease by $94,000 with startup of the Tenmile Creek Water Treatment Plant in FY1990, in relation to the no-build alternative (Table 3-4 shows projected operating expenses through FY1991).

OTHER REVENUES

- System development charge revenues will amount to $104,490 annually beginning in FY1987.

- Hydrant charges, miscellaneous sales, and wastewater accounting charge revenues will amount to $24,807, $37,300, and $55,823 per year, respectively.

- Interest income was calculated assuming a 7 percent interest rate on the average fund balance.

RATE INCREASES

- All rate increases were assumed to be uniform "across the board" percentage increases in all users rates.

- Rates have not been reduced in response to lower revenue requirements from rates.

Table 3-4
City of Helena
Forecast System Operating Costs
Fiscal Years Ending June 30th

Item	Inflation Rate(%)	Actual 1985	Budgeted 1986	Forecast 1987	1988	1989	1990	1991
Water M & O								
Personal Svcs	3.00%	$446,547	$480,203	$494,609	$509,447	$524,731	$540,473	$556,687
Maint. & Operations								
Chemicals & Lab	3.00%	$73,664	$91,071	$93,803	$96,617	$99,516	$102,501	$105,576
Gas, Oil & Lube	3.00%	$10,396	$15,475	$15,939	$16,417	$16,910	$17,417	$17,940
Utility Charges	Varies	$132,710	$193,120	$206,832	$241,993	$275,872	$303,459	$318,632
Administration	3.00%	$115,891	$114,233	$117,660	$121,190	$124,825	$128,570	$132,427
Vehicle Repairs	3.00%	$14,384	$21,544	$22,190	$22,856	$23,542	$24,248	$24,975
Contract Payments	3.00%	$63,185	$84,201	$86,727	$89,329	$92,009	$94,769	$97,612
Const & Maint. Mat.	3.00%	$10,217	$15,000	$15,450	$15,914	$16,391	$16,883	$17,389
Insurance	3.00%	$27,369	$37,900	$39,037	$40,208	$41,414	$42,657	$43,936
Other	3.00%	$37,622	$92,743	$95,525	$98,391	$101,343	$104,383	$107,515
Subtotal M&O W/O Project		$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,375,360	$1,422,690
Subtotal M&O With Project		$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Water Accounting								
Personal Svcs	3.00%	$52,378	$58,727	$60,489	$62,303	$64,173	$66,098	$68,081
Maint. & Operations								
Postage	3.00%	$11,409	$12,306	$12,675	$13,055	$13,447	$13,851	$14,266
Contract Payments	3.00%	$12,861	$14,045	$14,466	$14,900	$15,347	$15,808	$16,282
Other	3.00%	$24,293	$29,968	$30,867	$31,793	$32,747	$33,729	$34,741
Subtotal Accounting		$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Forecast Total Operations								
Without Project		$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,504,845	$1,556,060
With Project		$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Year-to-Year Growth (%)								
Without Project	na	22.04%	3.63%	5.22%	4.94%	4.34%	3.40%	
With Project	na	22.04%	3.63%	5.22%	4.94%	-2.18%	3.40%	

- All rate increases are implemented at the beginning of each fiscal year.

RESERVE REQUIREMENTS

- The revenue bond account must maintain a minimum balance equal to one-half the maximum amount of debt service in any future fiscal year on the existing bond issue ($506,000), plus any additional required fund balance for the proposed bond issue or loan.

- Working capital reserve must be maintained equal to one month's operating expenses.

- Accounts receivable will amount to 15 percent of the City's annual revenue requirements from rates.

- Cash held for bond payments at the end of each fiscal year will be approximately 19 percent of the City's annual debt service payment in each year.

IMPACTS ON RATES AND TYPICAL USER BILLS

Table 3-5 summarizes the percentage increases in all users' rates needed to meet the utility's financial requirements. The table shows that annual rate increases of 6.4 percent in FY1988 and between 1 and 2 percent in FY1989, FY1990, and FY1991 would be needed under the no-build alternative. By comparison, Alternative 5 (subsidized state loan), the next least-cost alternative, requires rate increases of 4.3 percent in FY1987, 22.3 percent in FY1988, 11.9 percent in FY1989, and 4.1 percent in FY1990. Rates under Alternative 5 would increase significantly in FY1992, when the interest rate subsidization period would expire.

Table 3-5
City of Helena
Required Percentage Rate Increases
Fiscal Years Ending June 30th

Financing Alternative	Percentage Increases 1987	1988	1989	1990	1991
Annual Rate Increases (A Alternatives)					
Alternative 1 - No Build	0.0%	6.4%	1.9%	1.6%	1.1%
Alternative 2 - Revenue Bond - No Grants	0.0%	38.3%	9.9%	3.7%	0.0%
Alternative 3 - Revenue Bond With Grants	0.0%	35.4%	10.3%	3.8%	0.0%
Alternative 4 - State Loan - No Subsidy	4.3%	30.4%	10.6%	3.7%	0.0%
Alternative 5 - State Loan With Subsidy	4.3%	22.3%	11.9%	4.1%	0.0%
Alternative 6 - G. O. Bond	0.0%	3.6%	38.8%	4.0%	0.0%
One Rate Increase For Entire Period (B Alternatives)					
Alternative 1 - No Build	10.3%				
Alternative 2 - Revenue Bond - No Grants	52.3%				
Alternative 3 - Revenue Bond With Grants	49.9%				
Alternative 4 - State Loan - No Subsidy	51.2%				
Alternative 5 - State Loan With Subsidy	44.2%				
Alternative 6 - G. O. Bond	43.3%				

Under the "B" alternatives (one rate increase in FY1987 for the entire study period), the no-build alternative (Alternative 1B) would require a 10.3 percent rate increase. The least-cost build alternative under the one rate increase option is the general obligation bond, which would require a 43.3 percent rate increase.

Table 3-6 shows the impact that the alternative single rate increased financing plans would have on the volume rates and the bills of some typical users. Under the no-build alternative, the volume rate for the first block of 0-5 hundred cubic feet (HCF) of water consumption would only increase from $8.50 currently to $9.38 in FY1987. In contrast the volume rate for the first block under Alternative 2 (revenue bond with no grants), the highest cost alternative, would increase to $12.95.

CONCLUSIONS

Based on this analysis, the order of each alternative from lowest to highest cost assuming annual rate increases (not including Alternative 1) would be:

Alternative 5 - Subsidized DNRC Loan
Alternative 6 - G. O. Bond
Alternative 3 - Revenue Bond With Grants
Alternative 4 - DNRC Loan - No Subsidy
Alternative 2 - Revenue Bond - No Grants

The order of these alternatives, assuming one rate increase in FY1987 for the entire period would be:

Alternative 6 - G. O. Bond
Alternative 5 - State Loan with Subsidy
Alternative 3 - Revenue Bond With Grants
Alternative 4 - DNRC Loan - No Subsidy
Alternative 2 - Revenue Bond - No Grants

Table 3-6
City of Helena
Impact On Volume Rates and Typical Bimonthly User Bills
Single Rate Increase Alternatives (B Alternatives)
Fiscal Years Ending June 30th

Financing Alternative	1986	1987	Difference
Volume Charge - Block 1 (Also Minimum Charge 3/4" Meter)			
Alternative 1 - No Build	$8.50	$9.38	$0.88
Alternative 2 - Revenue Bond - No Grants	8.50	12.95	4.45
Alternative 3 - Revenue Bond With Grants	8.50	12.74	4.24
Alternative 4 - State Loan - No Subsidy	8.50	12.85	4.35
Alternative 5 - State Loan With Subsidy	8.50	12.26	3.76
Alternative 6 - G. O. Bond	8.50	12.18	3.68
Residential - 21 HCF - Family of Four Winter Average			
Alternative 1 - No Build	$28.02	$30.91	$2.89
Alternative 2 - Revenue Bond - No Grants	28.02	42.67	14.65
Alternative 3 - Revenue Bond With Grants	28.02	42.00	13.98
Alternative 4 - State Loan - No Subsidy	28.02	42.37	14.35
Alternative 5 - State Loan With Subsidy	28.02	40.40	12.38
Alternative 6 - G. O. Bond	28.02	40.15	12.13
Commercial - 85 HCF - Average Winter			
Alternative 1 - No Build	$106.10	$117.03	$10.93
Alternative 2 - Revenue Bond - No Grants	106.10	161.59	55.49
Alternative 3 - Revenue Bond With Grants	106.10	159.04	52.94
Alternative 4 - State Loan - No Subsidy	106.10	160.42	54.32
Alternative 5 - State Loan With Subsidy	106.10	153.00	46.90
Alternative 6 - G. O. Bond	106.10	152.04	45.94
Commercial - 133 HCF - Average Summer			
Alternative 1 - No Build	$161.03	$177.62	$16.59
Alternative 2 - Revenue Bond - No Grants	161.03	245.25	84.22
Alternative 3 - Revenue Bond With Grants	161.03	241.38	80.35
Alternative 4 - State Loan - No Subsidy	161.03	243.48	82.45
Alternative 5 - State Loan With Subsidy	161.03	232.21	71.18
Alternative 6 - G. O. Bond	161.03	230.76	69.73
Commercial - 1,000 HCF - Large User			
Alternative 1 - No Build	$1,123.40	$1,239.11	$115.71
Alternative 2 - Revenue Bond - No Grants	1,123.40	1,710.94	587.54
Alternative 3 - Revenue Bond With Grants	1,123.40	1,683.98	560.58
Alternative 4 - State Loan - No Subsidy	1,123.40	1,698.58	575.18
Alternative 5 - State Loan With Subsidy	1,123.40	1,619.94	496.54
Alternative 6 - G. O. Bond	1,123.40	1,609.83	486.43

A review of the analysis results indicates that the key factor in determining which alternative is the least cost to the City is the interest rate on the bond or loan. Conversations with DNRC staff indicate that it is possible that Helena could receive a 2 or 3 percent interest rate subsidy from the DNRC for a 5-year period. Issuing a self-supporting general obligation bond that is junior to the City's outstanding 1985 water system refunding revenue bonds presents several difficulties, including: having a bond election, making special arrangements for sale of this "unusual" type of bond, and most importantly, limiting the ability of the City to issue general obligation bonds for other purposes.

Receipt of federal or DNRC grants may also be difficult to obtain due to recent federal spending cutbacks and DNRC grant distribution regulations. The DNRC loan without an interest rate subsidy may or may not offer a better interest rate to the City than it can obtain in the bond market, but it does offer lower selling costs and possibly a smaller debt reserve requirement than might be required if the City issued bonds.

RECOMMENDATIONS

We recommend that the City consider each of these alternatives in the approximate order from least to highest cost presented in this analysis. In evaluating Alternative 6, special consideration should be given to whether the City wishes to pledge its full faith and credit for this bond issue or not (i.e., issue a general obligation bond). The cost of applying for a subsidized loan or a state or federal grant appears to be quite small, and therefore is probably worth the effort even if the probability of receiving a grant or a subsidized loan is also small.

We also recommend, in accordance with the discussion of financing mechanisms presented in Appendix A, that the City: (1) review the method used to calculate water rates and consider adopting a cost-of-service framework as the basis for their calculation, and (2) discontinue use of the declining block rate structure and adopt a uniform volume charge for all water consumed beyond some minimum amount.

APPENDIX A

APPENDIX A

TO: Richard A. Nisbet, P.E./Director of Public Works
City of Helena

FROM: Kenneth L. Rust/CH2M HILL

DATE: February 26, 1986

SUBJECT: Review of Financing Mechanisms

PROJECT: B19511.C0

COPIES: Phillip Butterfield/CH2M HILL

INTRODUCTION

The purposes of this Technical Memorandum are to identify and review potential financing mechanisms that may be available to the City of Helena to assist in financing needed water system improvements and to review the City's existing water rate structure. Based on this review, specific recommendations will be made and a financing approach will be presented.

FINANCING MECHANISMS

In developing a list of available financing alternatives, the emphasis has been on those mechanisms that are currently available under existing law and/or established state and federal government programs. Consequently, this approach focuses on realistic alternatives that are available to the City for financing construction of water facilities.

GRANTS

The availability of state and/or federal grants to help fund new water facilities is limited. The primary state grant program is one offered by the Montana Department of Natural Resources & Conservation (DNRC). Under this program, the maximum grant amount for a public applicant is $100,000. Federal government grant programs for municipal water systems have always been limited in both size and availability. The most likely source of federal grants is through the Community Development Block Grant Program administered by the Department of Housing and Urban Development.

LOANS

One obvious and widely used source of finance is borrowing money from either public or private investors. A number of

borrowing options are available to the City and include the sale of general obligation bonds, special improvement district bonds, assessment bonds, or revenue bonds.

General Obligation Bonds

General obligation bonds are tax-exempt borrowings that can be paid for from ad valorem property taxes. There are two kinds of general obligation bonds: self-supporting and nonself-supporting. A self-supporting general obligation bond is one in which revenues from another source (water rates for example) are used to pay all debt service on the bonds and in the event such revenues are insufficient, property taxes are bound to make up the shortfall. This type of general obligation debt is sometimes referred to as a double-barrelled bond. Nonself-supporting general obligation bonds are bonds that are paid in whole or in part from a property tax levy.

Special Improvement District Bonds

Special improvement district (SID) bonds are a kind of self-supporting general obligation bond. They are payable primarily from installment assessment payments made by benefitted property owners. Assessed property owners within an SID may apply to repay their assessments over a period of not more than 20 years. Because they are general obligation bonds, SID bonds are supported by the ability to levy a property tax and, therefore, offer a low interest rate to the property owner.

Assessment Bonds

Assessment bonds are like SID bonds except that they do not include the ability to levy a property tax. Because assessment bonds are not secured by property taxes, they are less marketable than SID bonds and bear a higher interest rate. In addition, because of the lack of property tax support, assessment bond interest rates vary depending on the wealth, as measured by property values, of the entity selling the assessment bond.

Revenue Bonds

Revenue bonds are tax-exempt bonds that are payable solely from a designated source of revenue. For example, the City

of Helena has in the past issued revenue bonds to fund major water system capital improvements and has pledged water revenues to repay the bonds. The interest rate payable on a revenue bond depends entirely on the quality of the revenues that support it and the future and past operational history of the revenue producer.

BOND BANKS

A bond bank is a system where a bond issuer with a high credit rating (and a correspondingly low interest cost) borrows money in order to buy bonds from an issuer with a lower credit rating. The purchased bonds have approximately the same terms (and approximately the same low interest cost) as those of the bond bank.

The Montana DNRC operates a bond bank program as part of its Water Development Program. Under this program, eligible projects include the construction of all physical works for the purpose of conserving, distributing, developing, storing, and utilizing water for beneficial use. Subject to approval, the DNRC will purchase bonds issued by the applicant to finance the project.

PRIVATIZATION

A relatively new trend in the area of municipal finance involves the private sector in the financing, ownership, and operation of public facilities, including water utilities or portions thereof. Private sector involvement in municipal finance includes the more traditional municipal leases, and sale-leaseback arrangements in addition to actual private ownership and operation of municipal facilities. From the standpoint of a municipality, the primary attraction of private sector involvement in municipal projects is the potential for reduced cost. The reduction in cost is created largely by federal tax law and the ability of municipal projects to transfer specific tax benefits to private entities.

WATER FUND NET REVENUES

A water utility can use its ability to generate excess net operating revenues to assist in financing capital facilities. Operating revenues typically include the collection

of user charges, connection charges, system development charges, or other miscellaneous charges for service. To the extent that the sum of these revenues exceeds annual operating expenses and debt service on outstanding bonds, funds are available to finance the construction of capital facilities. The level of excess net operating revenues can be affected by the imposition of new charges or by increasing existing ones.

EVALUATION OF FINANCING ALTERNATIVES

A set of criteria have been developed to assist in evaluating the financing mechanisms that may be available to the City of Helena. Ideally, a particular financing mechanism should satisfy all criteria. However, in practice this is usually not the case. Most financing mechanisms will meet some of the criteria better than others. The purpose of the evaluation process is to determine a financing approach that best meets the specific needs of the City.

EVALUATION CRITERIA

Legality

The viability of a particular financing option depends on the legal authority of the City to engage in certain types of financial and contractual commitments. Also important are relevant federal laws that may affect the use of a particular financing option. This criterion will be used to evaluate the legal aspects of each financing alternative.

Availability and Revenue Adequacy

In order to be of use to the City, each financing option must be available to the City at the time construction of capital projects commences. It is also important that the financing method be capable of supplying funds in a quantity sufficient to meet estimated construction costs. This evaluation criterion will address the availability and adequacy of funds under each alternative.

Affordability

This criterion will be used to evaluate the affordability of each individual financing alternative. The affordability evaluation is comprised of two elements; affordability for

the City and affordability for ratepayers. Affordability concerns for the City include debt management objectives and protection of its credit rating. Affordability impacts for ratepayers include the affects on water rates and property taxes.

Ease Of Administration

This criterion will evaluate the administrative requirements that each alternative would impose on the City. Some financing alternatives require considerable staff time to set-up and administer. The administrative impacts need to be considered in the evaluation of alternative financing mechanisms.

GRANTS

Legality

Legality of grant programs is generally not an issue. Grant programs are established pursuant to state or federal law and are based on the authority of these entities to appropriate funds for specific purposes. Qualification guidelines generally accompany each grant program and are used to evaluate individual applicants.

Availability and Revenue Adequacy

As discussed earlier, two grant programs potentially are available to the City. The state DNRC offers a grant program for water-related projects proposed by both private and public entities. Grants under this program are limited to $100,000. The federal government offers grant funds through the Community Development Block Grant (CDBG) program that can be used to construct water system improvements.

The state DNRC program, while available to the City, would not adequately fund the entire proposed water treatment project. A portion of the water treatment project up to the maximum grant amount, or perhaps some other project that had a cost of less than $100,000, could serve as the basis for a grant application. The application is reviewed by the state using defined criteria. Subject to this review, the application is ranked and compared against all other state projects to determine whether it qualifies for funding. A grant application cannot be submitted if the applicant also

applies for a DNRC loan in excess of $200,000. Availability and adequacy of funds under this program is limited.

The CDBG grant program administered by the federal government provides funding for a broad range of projects, including public facilities. Evaluation criteria are weighted towards those projects that specifically benefit low or moderate income residents and/or property owners. Consequently, the grant application must be completed in a manner that best shows the benefit of the proposed project to these income groups. Current funding of the CDBG program is subject to cutbacks due to Gramm- Rudman legislation. The state expects that total CDBG funding will be about $4.5 million for the FY1987 grant year with the proposed maximum grant award being $350,000. Grant applications are due by September 1. The maximum grant, if received, would still be insufficient to fully fund the estimated cost of the proposed facilities.

Affordability

Of all potential financing mechanisms, grants are the most affordable from both the City and the public's viewpoint. Grant funds do not have to be repaid by recipients and thus act as a dollar for dollar reduction in project costs that would otherwise have to recovered entirely from users.

Ease of Administration

The administrative requirements associated with the grant programs is minimal and primarily involves preparation of the grant application. If grant funds were received, additional documentation showing how the funds were expended would likely also be required.

LOANS

Legality

In general, the City has the authority to issue all the various types of bonds described earlier in this memorandum. However, some types of bonds are subject to more stringent legal requirements than others. General obligation bonds require a vote prior to their issuance. SID bonds first require that an improvement district be formed, and that property owners approve the project and resulting

assessments, before the City authorizes the sale bonds. Revenue bonds and assessment bonds generally do not require a vote in order to authorize their issuance. However, debt issues that are self-supporting through the collection of water revenues may increase annual water fund revenue requirements to a level that requires rate approval by the Montana Public Service Commission (PSC).

In addition to the City's authority to issue bonds, federal laws that pertain to the issuance of tax-exempt bonds must also be considered. The United States Congress is currently considering legislation that would restrict the ability of municipalities to issue tax-exempt debt that substantially benefits private individuals, impose requirements for the expenditure of funds, and limit the ability to earn interest on unexpended bond proceeds. These changes in federal law must be fully considered prior to the issuance by the City of new tax-exempt debt.

Availability and Revenue Adequacy

Issuing debt to finance improvements generally results in funds being available when needed. However, debt issues requiring voter approval would generally be viewed as less available. Adequacy of funds generated through the issuance of debt is very high. The City has the ability to control the size of the issue in order to generate funds sufficient to meet planned expenditure requirements.

Affordability

Impacts on City

From the City's standpoint, affordability of a particular debt issue depends largely on the issue itself. Water utility financing requirements need to be considered within the context of the City's overall credit quality, authorized debt limit, and debt management goals. Factors that affect credit quality include direct net debt per capita, overall net direct debt per capita, gross bonded per capita, ratio of net direct debt per capita to estimated fair market value, ratio of net debt to estimated fair market value, and ratio of gross bonded debt to estimated fair market value. Credit quality affects the ratings that are assigned to the City by national rating agencies such as Moody's Investor Services, Inc.. These credit ratings play an important role

in determining how much it will cost the City to borrow money.

For example, debt issues that are nonself-supporting (general obligation bonds paid for through the collection of property taxes) affect the City's overall credit quality by increasing the amount of overall net debt. Self-supporting general obligation debt (i.e., SID bonds, general obligation bonds that are paid for in whole through water revenues) have less impact on the City's overall credit quality because they are not included in the debt ratio calculations. However, if the revenue stream used to repay self-supporting debt should become insufficient, this debt would then be classed as nonself-supporting with associated negative affects on the City's debt ratios and overall credit quality.

Revenue bonds and assessment bonds do not contain a pledge of the City's full faith and credit and unlimited taxing power and are therefore not included in the calculation of debt ratios used to measure a City's overall credit quality. Revenue bonds are secured by the City's pledge to maintain rates adequate to meet required debt service obligations. Repayment security for assessment bonds is based on the value of underlying properties. Self-supporting debt without a full faith and credit pledge has the least impact on the City's debt ratios and does not "crowd out" other City projects that may require general obligation financing.

Impacts on Ratepayers

Interest rates have the most significant impact on affordability from the viewpoint of the ratepayer, assuming that repayment of the debt comes through water rates. In terms of interest rates, the four debt alternatives can be ranked, from lowest cost to highest cost, as follows:

1. General obligation bonds repaid from the collection of ad valorem property taxes and backed with a full faith and credit pledge.

2. General obligation debt repaid from the collection of water rate revenues, installment payments from assessed properties, or other revenue source, and backed with a full faith and credit pledge.

3. Revenue bonds repaid from revenues collected through water rates and backed by a pledge to maintain revenues at a specified level.

4. Assessment bonds repaid from revenues collected from water rate revenues, installment payments from assessed properties, or other revenue source, and backed by the assessed value of specified properties.

Affordability can also be affected by the way in which revenues are collected from customers. For example, a general obligation bond repaid from the collection of ad valorem property taxes, while having a low interest rate, is generally perceived as less affordable than a comparable debt supported by water rates because a significant number of tax-exempt water customers would not be required to assist in payment of the debt. User charges, as opposed to property taxes, are generally a more affordable, and certainly more equitable, way to recover the cost of financing water utility capital improvements.

Ease of Administration

None of the debt alternatives require significant administrative expense on behalf of the City. Staff time is required to put together the documentation used to support the issuance of debt. Once the debt issue is sold, very little ongoing administration is required. Assessment bonds or SID bonds that rely on assessment payments from property owners do require some additional administrative time to properly record assessment payments made by property owners. This can be minimized by including the billing and payment procedure with the collection of property taxes.

BOND BANKS

Legality

Legality of the state's DNRC bond bank program is not an issue. The bond bank program has been established pursuant to state law and the state's authority to appropriate funds for specific purposes. The program's guidelines define qualifying projects, applicants, loan limits, and evaluation criteria used to rank individual projects. Any entity can submit a loan request if they think they qualify.

Availability and Revenue Adequacy

The availability of funding under the DNRC loan program depends largely on the nature of the project and its ability to satisfy the established evaluation criteria. Applicants must submit their loan application by May 15 in the winter preceding the next legislative session. The DNRC evaluates all applications using established criteria to rank the individual applications. As a result of the ranking process, a priority funding list and funding level recommendation is developed. This forms the basis of the program proposal and appropriation bill that is submitted to the legislature for approval. Subject to approval, qualifying projects will receive funding in September of the year subsequent to when the application is first submitted. For example, if an application is submitted in May 1986 and is approved, funding would likely be available in September 1987.

The DNRC loan program does not set a dollar limit on the amount of the loan request. Consequently, this financing alternative has the capacity to provide the City with adequate revenues to construct needed facilities. However, the project must first rank high enough to be recommended. This fact makes this source of finance less reliable than some of the other alternatives.

Affordability

Impact on City

The DNRC loan program will likely be a cheaper source of finance for the City then a conventional loan sold to private investors. The interest rate charged to the City will largely depend on the state's credit rating. The state's higher credit rating allows them to borrow money at lower cost and these cost savings are then passed on to loan applicants in the form of lower interest rates. Also, because the state buys debt from the applicant in a negotiated sale, the cost of issuing debt is greatly reduced.

In negotiating the terms of the loan, the state requires that the qualifying applicant issue some form of debt, either general obligation, revenue, etc., for purchase by the state in a negotiated sale. Typical terms for a revenue bond issued by a city for purchase by the state are as follows.

1. Semiannual payments over a 20-year period.
2. Interest rate equals the rate on state bonds sold to finance the qualifying projects.
3. Debt coverage equals 125 percent of annual debt service.
4. Reserve fund equals one-half years' principal and interest.

The interest rate and the repayment period on the debt can be modified by the state if financial feasibility and need is demonstrated by the applicant. The cost of water service as a percent of median income is often used by the state in assessing need. Repayment terms of up to 40 years can be authorized by the DNRC along with reductions in the interest rate of up to four percentage points for the first five years of the repayment schedule. It may also be possible to negotiate with the state to reduce the 125 percent coverage and reserve account requirements if a more secure pledge (full faith and credit) is contained in the bond indenture.

Impact on Ratepayers

The cost of the DNRC loan, as determined by the interest rate, repayment period, and other security requirements, becomes part of the annual revenue requirements that must be paid for by ratepayers. The DNRC's loan program is more affordable than a conventional loan arrangement with private investors if some or all of the following conditions are met.

1. The interest rate on state bonds is less than that on City bonds.
2. Repayment terms offered by the state are less stringent than those offered by private investors.
3. Security requirements offered by the state are less stringent than those offered by private investors.
4. The cost of selling a debt issue to the state is cheaper than selling a debt issue to private investors.

The precise savings will depend on the terms offered by the state compared to the terms offered by private investors. Cost savings of 10 percent or more would not be unreasonable under this program.

Ease of Administration

The administrative requirements of participating in the DNRC program would, at the outset, be similar to the requirements of issuing debt. However, additional administrative effort is required over the course of the project and loan life. This includes submitting quarterly progress and financial reports during project construction and annual financial reports during the life of the loan. The DNRC further requires that all state laws regarding contracting and bid procedures for public projects be followed and that sufficient documentation be maintained for audit purposes. Applicants must also permit the department to monitor performance and conduct onsite visits.

PRIVATIZATION

Legality

Significant legal questions surround the issue of privatization and third-party financing of municipal projects. Key legal questions that have to be resolved to make such transactions work include the City's authority to enter into long-term, multiple year service contracts and the treatment of certain cost items under federal tax law. Privatization as a financing mechanism, because of its complexity and continuing alterations in tax law, requires substantial legal assistance to ensure its viability.

Availability and Revenue Adequacy

Changes in federal tax law over the past four years, and additional changes that are part of proposed tax reform legislation, have served to limit the application and feasibility of privatization. Favorable tax treatment of project costs incurred by a private owner is the primary motivation for the private sector to own and operate facilities typically owned by a municipality. Proposed changes in federal tax law, passed by the U.S. House of Representatives in December 1985, include the following items that have a significant impact on privatization:

1. Eliminate the 10 percent business investment tax credit.
2. Eliminate accelerated depreciation and replace it with a straight-line method.
3. Reduce the maximum corporate tax rate from 46 to 36 percent.
4. Curtail the availability of industrial development revenue bonds to finance "privatized" facilities.

By reducing the tax benefits and resulting returns to private investors, private sector interest in privatization may decline making it more difficult to put this kind of deal together.

Privatization as a financing mechanism, assuming that a workable deal can be constructed, has the ability to adequately fund the projects being considered by the City. Availability of funds, not adequacy, is the primary concern with the privatization financing option.

Affordability

The primary motivation for pursuing privatization as a financing mechanism is to lower cost. Proponents of privatization claim that annual costs under privatization are less than those under a conventional financing approach. It is important to note that privatization does not mean that the facilities are free. The City pays the private operator a fee for the ownership and operation of facilities and these costs must be passed on to ratepayers through rates.

The cost advantages associated with privatization have declined as a consequence of changes in federal tax law. If current proposed tax law changes are implemented, potential cost savings could be reduced by as much as forty percent. Given these changes, it is likely that the cost impacts of a privatization financing would be similar to that under conventional financing.

Ease of Administration

Significant administrative time would be required to set up the necessary contracts and service agreements to implement

a privatized financing, particularly in the form of legal counsel. Subsequent to its creation, the long-term service contract would be relatively easy to administer. It is important for the City to realize that under privatization, a certain amount of control over the way facilities are operated is forfeited because no longer do they own all the facilities on which they rely on for service. For this reason the service contract must be carefully developed to protect the City from problems that may develop 5, 10, and 20 years in the future.

WATER FUND NET REVENUES

Legality

The City has the legal authority to levy rates and charges for the use of its water system and can raise these charges as necessary to meet the increased costs of the water utility. The increase in revenues collected from rates and charges in a one-year period cannot exceed twelve percent unless specific approval is granted by the Montana Public Service Commission (PSC). However, if a municipality is under a state order to construct certain facilities or make specific operating improvements, the twelve percent rule is waived.

Availability and Revenue Adequacy

Subject to the revenue limitations discussed above, the City has the means to increase net revenues available, after payment of all operating and debt service costs, for financing new improvements. This financing method is limited in its ability to fund major capital expenditures. In order to meet large construction outlays, it is necessary to accumulate funds over time or else raise rates and charges to unacceptably high levels in order to generate sufficient revenues to meet a construction project's cash flow schedule. This would likely violate the PSC's twelve percent rule and would place the entire financing burden on existing ratepayers.

However, by broadening the revenue base of the water utility, the City may be able to increase net revenues in a way that provides money for financing new facilities while increasing the equity of its overall user charge/cost recovery

system. A common feature of most municipal rate schedules throughout the United States is a charge levied against a customer at the time of connection to the water system. This charge, often referred to as a system development charge (SDC), is designed to recover the cost of system capacity that has been provided to meet the demands of new customers. The City currently does not have such a charge as part of its rate schedule. Depending on how the charge is calculated, annual revenues collected from such charge could be $100,000 or more.

This broadening of the water fund's revenue base could help to protect existing ratepayers from bearing the entire cost of new facilities designed, in part, to serve future users. It should be noted that SDC revenues have the potential to be unreliable because they are function of new development that is driven by the local and national economy. Furthermore, the PSC has not viewed favorably the use of SDC's as a cost recovery method and may not allow their imposition if revenues collected exceed the PSC's twelve percent rule.

Affordability

Impact on City

From the standpoint of the City, the adoption of a SDC increases the revenues of the water fund and has a positive impact on key financial indicators such as the debt coverage ratio. SDC revenues offset the need to increase water rates and help to hold down the cost to existing ratepayers. The increase in financial stability may allow the City to better time future debt offerings to take advantage of favorable market conditions.

Impact on Ratepayers

The collection of SDC revenues have a positive effect on existing ratepayers by reducing the amount of revenue that must be reovered through water rates. For new customers, a lump-sum payment is required in order to connect to the water system. The SDC can range from several hundred dollars for a residential customer to thousands of dollars for a large commercial or industrial customer. Opponents of SDCs argue that such a charge inhibits growth and development, although the extent of this effect is difficult to assess.

Many cities offer new customers the opportunity to pay the charge over time through use of special improvement district bonds paid for by assessments against the property.

Ease of Administration

Increasing net revenues, accomplished either by imposing new fees such as an SDC or by raising rates, is relatively simple to administer. Once approved, changes in billing codes easily allow the increased water rates to be calculated. Collecting a SDC can be coordinated with the building permit process and does not substantially increase staff time.

RECOMMENDED FINANCING APPROACH

Based on the analysis of financing mechanisms discussed in this memorandum, the recommended financing approach for the City of Helena should include the following items.

1. Submit a CDBG grant application.
2. Implement a system development charge to help broaden the water fund's revenue base.
3. Submit a loan application to the state DNRC.
4. Evaluate the type of credit pledge that the City would prefer to offer the state.

This financing approach best takes advantage of existing programs that are currently available to the City under existing law. The approach seeks to minimize project impacts by reducing costs through the receipt of grant funds and broadening of the water fund's revenue base. Use of the DNRC loan program will help to minimize the cost of capital facilities not covered by grants or increased net revenues. In the worst possible case where all grant and loan applications were denied, the City could still resort to a conventional revenue bond sale to finance the facilities.

The next phase of the financial analysis will integrate the financing approach with the water fund CIP to estimate annual revenue requirements and user charge impacts. The results of this quantitative analysis will better illustrate the financial impacts of the various financing and construction phasing alternatives and will serve as the basis for final recommendations.

RATE STRUCTURE REVIEW

This section of the Technical Memorandum will review the rate structure currently used by the City of Helena to bill customers for water service. The review will focus on the rate structure's ability to generate sufficient revenues to meet water system operating and capital costs, equitably recover costs from various types of customers, and complement the operating characteristics of the water system.

REVENUE RECOVERY

The City currently bills customers bimonthly for water service. The rate schedule includes three rate blocks with the cost per hundred cubic feet of water declining as consumption increases. A minimum charge is also assessed all water customers and varies based on meter size.

The rate structure currently used by the City is capable of generating adequate revenues to meet water fund revenue requirements. Rates can easily be updated to reflect current costs based on the percent increase in annual revenue requirements. However, the absence of consumption information for different types of customers makes it difficult to analyze water use trends and the impacts they may have on water fund revenues. Additionally, it is difficult to estimate water demand for new customers when consumption data for similar customers is not routinely collected.

The City also includes in its schedule of charges the cost of completing meter installations. The rate varies by meter size and currently ranges from $75 to $240. This charge should be designed to fully recover all costs, both direct and indirect. Comparable charges in other cities are often substantially higher. The City may wish to review this charge to ensure its adequacy.

EQUITY

Current water ratemaking practices generally favor rate structures that follow cost-of-service principles. Thus, individual customers should pay in proportion to what it costs to provide them service. The current City practice of classifying all water system customers as one group fails to recognize differences in demand patterns between customers. Customers that use water unevenly over the course of a day, month, or year are more expensive to serve than customers

who consume water at a fairly constant rate over the same period. To ensure equity between customers, it is necessary to group together customers with relatively similar water usage characteristics. By allocating water system costs to individual customer classes based on class usage patterns, equity between customers can be achieved.

An equitable rate structure also precludes allowing quantity discounts below the cost of serving a given customer class simply because water is sold in larger than average quantities. Declining block rates are difficult to design so that they will recover revenues from each user class equal to their cost of service. Modern rate design tends to favor the concept of uniform rates by customer class.

COMPLEMENTING SYSTEM OPERATING CHARACTERISTICS

Ideally, a City's rate structure should be consistent with the operating characteristics of the system. For example, a rate structure should not discourage use of water through surcharges if surplus capacity is available. Conversely, a rate structure should not encourage usage through lower rates when its ability to meet peak demands is limited. The City's existing declining block structure works in just this way. Consumption is encouraged creating the need for additional water supply, treatment, transmission, distribution, and storage capacity. Although the extent to which the rate structure encourages additional water use is difficult to assess, it clearly does not help to reduce the City's need for additional peak-day demand capacity.

SUMMARY AND RECOMMENDATIONS

The City should review the method used to calculate water rates and consider adopting a cost-of-service framework as the basis for their calculation. The primary benefits of a cost-of-service framework are that the resulting schedule of rates is more equitable and that customers receive more accurate price signals for making their consumption decisions. However, the City should realize that adopting a cost-of-service framework may result in significant rate impacts for specific customer classes based on more precise cost allocation and water demand data. The City may wish to phase in cost-of-service rates over a period of time to avoid large rate impacts.

The City should discontinue its use of the declining block rate structure and adopt a uniform volume charge for all water consumed beyond some minimum amount. The declining block rate structure encourages water use and is difficult to justify from a cost-of-service standpoint.

The City should review the meter installation charges to ensure that they fully reflect all direct and indirect costs. The City's water fund cannot afford to subsidize miscellaneous customer services through water rates.

APPENDIX B

APPENDIX B

TECHNICAL MEMORANDUM

TO: Richard A. Nisbet, P.E./ Director of Public Works, City of Helena

FROM: Kenneth L. Rust/CH2M HILL

DATE: January 20, 1986

SUBJECT: System Development Charges

PROJECT: B19511.C0

COPIES: Phillip Butterfield/CH2M HILL

INTRODUCTION

This Technical Memorandum is broken into three general sections. The first section reviews the concept of a system development charge as it pertains to financing water utility capital improvements, and in particular, how such a concept could be applied by the City of Helena. The second section evaluates various system development charge alternatives that have been developed by City staff. The third section sets out some additional alternatives for consideration by City staff along with recommendations for implementing and administering a system development charge.

PHILOSOPHY OF SYSTEM DEVELOPMENT CHARGES

A common feature of many municipal water utility rate structures is a one-time charge, generally paid when a customer first connects to the water system, that represents, in whole or in part, the cost incurred by the utility to provide capacity for future users. This charge, sometimes referred to as a buy-in charge, a latecomer's fee, a connection fee or charge, or a system development charge, can vary significantly between utilities. Factors influencing the level of such a charge include the methodology used to calculate the charge, the cost recovery philosophy of the particular utility or municipality, and the underlying capital cost structure of the utility. For purposes of this memorandum, this charge will be referred to as a system development charge (SDC).

Water utility capital improvements tend to increase system capacity in large chunks. Consequently, it is possible for a water system to have substantial unused capacity available at any given point in time. To the extent that this extra capacity is paid for by existing water system customers, a potential inequity is created as current users subsidize the cost of providing capacity for future users. If, however, the revenues collected through the SDC are used to offset current operating costs a reverse form of subsidy occurs. Therefore, an equitable SDC needs to consider several issues; the cost basis underlying the

SDC, the measure of capacity units used to calculate the SDC, and the policy governing the use of SDC revenues.

DETERMINATION OF THE COST BASIS

The intent of any SDC is to reflect the underlying cost of providing system capacity to users of the water system. Many different approaches have been used to calculate a utility's cost basis including historical asset cost, historical asset cost less accumulated depreciation and contributions, asset replacement cost, asset replacement cost less accumulated depreciation and contributions, incremental costs of planned capital outlays, historical or replacement costs adjusted for outstanding debt, and combinations of the above. Each method has its strengths and weaknesses.

The most conservative method of calculating the SDC cost basis uses historical costs that are adjusted for depreciation and customer contributions. This approach is consistent with current accounting standards limiting asset valuation to original cost and the requirements of regulatory agencies that generally favor the use of historical cost information. Methods that depart from the use of historical cost as the cost measurement basis can be viewed as more agressive and will result in a larger SDC. Consideration should be given to potential legal questions that may be raised with regard to calculating a water utility's cost basis. Legal precedent has been established for using some measure of historical cost as the basis for measuring system cost. Although use of replacement cost has strong theoretical merit, it may not withstand legal challenge.

The handling of outstanding debt used to finance system assets poses an interesting technical problem in the calculation of an SDC. There are several different approaches for handling debt. One approach argues that the valuation of a system and the method used to finance capital acquisition are separate issues. Therefore, outstanding debt should not be removed from the system's cost basis. However, opponents to this philosophy argue that a customer may pay twice for the same facilities. Once at the time of connection, through payment of the SDC, and then again through rates. To the extent that SDC revenues offset debt service on outstanding debt, overall water system revenue requirements are reduced and the problem of double charging is minimized. One alternative to this approach is to reduce the cost basis of the water system by the amount of outstanding debt. This clearly eliminates the potential for double charging and is much simpler to defend and explain.

CALCULATION OF CAPACITY UNITS

In the SDC equation, the cost basis can be thought of as the numerator while the number of capacity units can be viewed as the denominator. The cost of capacity when divided by the appropriate number of capacity units will result in a cost per unit of capacity. The number of capacity units is usually based

on the design capacity of the system as measured in millions of gallons per day (mgd) or hundreds of cubic feet (hcf). More sophisticated SDC methodologies measure system capacity for various service parameters such as base use and extra-capacity use (see attached Appendix). Under this approach, system costs are allocated to these various service parameters and the design capacity of each parameter is used to calculate unit costs. If done properly, this approach can yield a more equitable schedule of charges that recognizes water usage differences between customer classes.

POLICY GOVERNING THE USE OF SDC REVENUES

It is extremely important for utilities to develop a consistent policy governing the use of SDC revenues. The revenues generated by such a charge should be used to offset those costs for which they are designed to recover, system capacity costs. Therefore, SDC revenues should be limited to the financing of new facilities, modernizing old facilities, or funding annual debt service payments. The utility should not allow ongoing operating costs to be funded by SDC revenues.

It is also important for utilities to recognize that SDC's are an unstable revenue source. Annual SDC revenues are related to the level of construction activity in the community. Due to the cyclical nature of construction and development, utilities must expect and plan for fluctuations in annual SDC revenues. Expecting SDC's to be fully capable of paying all debt service on bonds sold to finance new facilities is unreasonable, financially imprudent, and could cause serious financial problems for the utility.

SDC'S AS A FINANCING TOOL FOR THE CITY OF HELENA

The City of Helena is in the process of developing the water utility's capital requirements for the next five years. It is apparent that the City will require substantial investment in new water storage, treatment, and transmission facilities in order to meet new demands and to improve the quality of service to existing customers. The prospect for receiving grant funds is extremely limited and under no circumstance would it be reasonable to assume that they would be in an amount sufficient to pay for all proposed costs. Consequently, financing the cost of these facilities will likely occur through the sale of bonds, either to the State of Montana or to private investors, with repayment being made through water rates.

Assuming a conventional financing approach, water rates will have to increase to meet the increased revenue requirements of the water fund. However, to the extent that the City can broaden its water fund revenue base, rate impacts can be mitigated. The proposed SDC is one way the City can increase water fund revenues without raising rates. The actual revenue generated by such a charge will depend on many factors including the methodology used to calculate the charge and the number of new connections to the

system. Nevertheless, imposition of such a charge would be an important source of revenue and would increase the equity of the water utility's cost recovery practices.

EVALUATION OF ALTERNATIVE SDC CALCULATIONS

City staff have developed several SDC alternatives using water system cost and usage information. This section of the Technical Memorandum will evaluate those alternatives focusing on three areas: underlying cost basis, calculation of system capacity, and overall equity.

The City has developed four SDC alternatives. For purposes of this memorandum, each alternative will be referred to as follows:

Alternative 1--Referred to by the City as the CH2M HILL alternative
Alternative 2--Referred to by the City as the Bender Theory
Alternative 3--Referred to by the City as the Brown & Caldwell Theory
Alternative 4--Referred to by the City as the Ellis Theory

The results of the City's SDC calculations for each of these alternatives is shown in Table 1.

ALTERNATIVE 1

Although the City refers to this as the CH2M HILL method, CH2M HILL did not develop the calculations. CH2M HILL assisted the City in developing the appropriate formulas and cost indices used in calculating asset replacement values. Actual calculations were made by City staff.

Cost Basis

This alternative uses the depreciated replacement value of water system assets as the cost basis for the SDC. This method of calculating the value of water system assets recognizes two important factors: (1) operation of the system has resulted in a portion of the system's value being used up (i.e., depreciated), and (2) changes in the general price level over time have caused the replacement cost of system assets to increase. This cost measurement method results in an estimate of the system's value based on what it would cost to replace, in current dollars, each asset net of accumulated depreciation.

The City's calculation of system value appears to be accurate. Use of the Handy-Whitman index, an index designed specifically for water utilities to measure price changes, along with National Association of Regulatory Commissioners depreciation guidelines for water systems provides the City with a defensible cost basis. The City's asset accounting system does not allow all assets to be accurately identified, particularly distribution mains, customer service lines, meters, meter boxes, and fire hydrants. It is assumed that these assets are included as part of the

TABLE 1
CITY OF HELENA
COMPARISON OF SDC ALTERNATIVES

ITEM	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Cost Basis	$20,567,270	$38,253,103	$33,359,865	$12,837,270
Capacity Units	17,536	17,536	17,536	17,536
Charge Per Capacity Unit	$1,173	$2,181	$1,902	$732
Cost Per Meter:				
5/8 x 3/4	$1,170	$2,181	$1,900	$732
3/4	$1,755	$3,272	$2,850	$1,098
1	$2,925	$5,453	$4,750	$1,830
1-1/2	$5,850	$10,905	$9,500	$3,660
2	$9,360	$17,448	$15,200	$5,856
3	$17,550	$32,715	$28,500	$10,980
4	$29,250	$54,525	$47,500	$18,300
6	$58,500	$109,050	$95,000	$36,600
8	$105,300	$196,290	$171,000	$65,880

general transmission system. It is also assumed that all developer and SID contributions have been deducted from the asset schedule. Since customers typically pay for the cost of the meter at the time of connection, these costs, assuming they are part of the general transmission system, should also be removed from the asset schedule. Although not identified separately, it is assumed that the City's water rights are included in the water fund's asset schedule. Special consideration should be given to measuring the replacement value of these rights.

System Capacity Calculation

The City's calulation of available system capacity is based on peak day design capacity. Peak day design capacity served as the basis for estimating the number of equivalent meters (capacity units) that could be served by the water system. City staff have calculated the number of equivalent meters (capacity units) using the number of actual water system customers by meter size adjusted to reflect hydraulic equivalents. Meter equivalents at peak day design capacity have been estimated based on the number of actual equivalent meters divided by the ratio of existing system peak day demand to design peak day demand.

This approach has a potentially serious flaw. The current peak day demand is based on water production not water sales. Consequently, it includes a significant amount of water that is lost through leaking water mains, etc. Water loss, although a major concern of the City, should not be included in the calculation of existing peak day demand. By doing so demand is greatly overstated. Water losses are an operations problem and should not be paid for through the SDC. A better measure of actual demand is metered water sales on the peak day. An example of how this would effect the calculation of the SDC is shown in a latter section of this memorandum.

The approach used to calculate unit capacity costs is based soley on peak day water demand. However, components of a water system are sized to meet a variety of demand conditions; average use, peak day use, peak hour use, fire flows, or some combination of uses. A more accurate calculation of water system capacity costs would be based on these individual demand components. The Appendix provides a detailed discussion of this concept.

Overall Equity

The overall equity of this alternative could be improved significantly by refining the method used to calculate system capacity. Water production does not accurately reflect the actual demand of water system customers. Metered water sales is a better measure of actual customer demands. Equity could also be improved by further allocating system costs to various system demand functions in conformance with cost-of-service ratemaking principles.

The method for calculating the cost basis is fair, with the noted exceptions. Since outstanding debt is not subtracted from the water system's value, new customers may be unfairly allocated, through water rates, debt service costs on bonds sold to finance new facilities. If SDC revenues paid for all the debt service this potential inequity would be minimimzed. The easiest way to avoid double charging would be to reduce the water system value by the amount of outstanding water system debt.

ALTERNATIVE 2

Cost Basis

In this alternative, the cost basis has been calculated based on the water system's undepreciated replacement value less outstanding water system debt. This assumes that the City's cost basis is equivalent to the cost of an unused, new system net of outstanding debt incurred to finance its construction. One could argue that rate payers should not incur the cost of depreciation on unused capacity and that this expense is appropriately allocable to new users. This approach results in a cost basis valuation that does not recognize that a portion of the system's value has, through operation of the system, been used up. By including system depreciation in the cost basis, new users are being asked to pay for value that may no longer exist.

The same concerns noted in Alternative 1 with regard to customer contributions and problems with the City's fixed asset accounting records also applies here. However, the primary shortcoming of this approach is the inappropriate determination of the cost basis.

System Capacity Calculation

The calculation of system capacity in this alternative is the same as that used in Alternative 1. Comments made in Alternative 1 also apply to this alternative.

Overall Equity

The equity of SDC's calculated under this alternative are seriously affected by the method used to determine the cost basis. The cost basis is significantly overstated and would result in new users paying for a significant portion of system value that simply does not exist. Although this approach recognizes that outstanding debt should not be included in the cost basis, it fails to recognize that use of the water system has reduced, through depreciation, the underlying value of system assets.

Other comments made in Alternative 1 with regard to the cost basis and system capacity calculation also apply to this alternative. The combination of all these factors make this alternative inequitable.

ALTERNATIVE 3

Cost Basis

This alternative defines the cost basis for the City's water system to be the difference in price that has occurred since the City first purchased a water system asset, either 5 years ago or fifty years ago, and the cost of replacing that asset today. It does not recognize that a portion of an asset's value may have declined through its use. Under this approach all that is being recovered is the price change between two points in time. These price changes are not representative of the City's underlying cost basis in the water system. This alternative's underlying theory with regard to measuring the cost basis is flawed and produces results that have no reasonable or justifiable basis. In some extremes, this approach could produce unusual and inconsistent results. For example, if a period of prolonged price defalation were to occur this method could result in a negative value for the cost basis. In other words the City would be paying future users to connect to the system.

The same concerns noted in Alternative 1 with regard to customer contributions and problems with the City's fixed asset accounting records also apply here. However, the primary shortcoming of this approach is the inappropriate determination of the cost basis.

System Capacity Calculation

The calculation of system capacity in this alternative is the same as that used in Alternative 1. Comments made in Alternative 1 also apply to this alternative.

Overall Equity

The equity of SDC's calculated under this alternative are seriously affected by the method used to determine the cost basis. The cost basis in this alternative simply does not measure the underlying value of the City's water system. The method used to calculate the cost basis is inaccurate and produces unreliable results.

Other comments made in Alternative 1 with regard to the cost basis and system capacity calculation also apply to this alternative. The combination of all these factors make this alternative extremely inequitable.

ALTERNATIVE 4

Cost Basis

This method calculates the water utility's cost basis using historical asset cost adjusted for price changes net of accumulated depreciation. It also subtracts out the the water fund's outstanding debt. Of the four alternatives, this approach

is the most conservative. As discussed earlier, it is possbile to mitigate the problem for double charging customers for system assets by applying SDC revenues to the payment of debt service. However, the easiest way to avoid this problem is to remove outstanding debt from the water utility's cost basis. Under this alternative, the cost basis represents the value of the City's water system net of all contributions, accumulated depreciation, and liens (i.e., outstanding debt) adjusted to reflect current replacement costs. Thus, the subsequent SDC calculation is based on the City's water system equity measured in current (nominal) dollars.

The same concerns noted in Alternative 1 with regard to customer contributions and problems with the City's fixed asset accounting records also apply here.

System Capacity Calculation

The calculation of system capacity in this alternative is the same as that used in Alternative 1. Comments made in Alternative 1 also apply to this alternative.

Overall Equity

This alternative results in the most conservative estimate of the water utility's cost basis. The underlying theory is similar to that used in Alternative 1 with the exception that outstanding debt is removed from the cost basis. This eliminates the potential for double charging and simplifies explanation of the charge. This approach to measuring the cost basis is well reasoned and defensible and is superior to the approach used in Alternatives 2 and 3.

Other comments made in Alternative 1 with regard to the cost basis and system capacity calculation also apply to this alternative. By improving the method used to calculate system capacity, overall equity would be substantially improved.

CH2M HILL PROPOSED ALTERNATIVE

An alternative calculation of SDC's has been made by CH2M HILL that estimates peak day water usage based on metered sales. Two options have been developed. Option A uses the cost basis developed by the City in Alternative 1. Option B uses the cost basis developed by the City in Alternative 4.

CALCULATION OF SYSTEM CAPACITY

Table 2 summarizes the data and assumptions used to calculate system capacity as it relates to per meter consumption. The basic premise used in these calculations is that the difference between system peak day design capacity and estimated peak day metered water demand represents available capacity. This approach nets out unaccounted for water and results in an estimate of peak day metered water sales per equivalent meter.

TABLE 2
CITY OF HELENA
CALCULATION OF SYSTEM DEVELOPMENT CHARGES
PROPOSED CH2M HILL ALTERNATIVE

CALCULATION OF SYSTEM PEAK DAY DEMAND FACTOR

Peak Day Formula:
$$\frac{\text{(Maximum Month for Class i)}}{\text{(Average Month for Class i)}} \times \frac{\text{(System Peak Day Rate of Flow)}}{\text{(System Max. Month Daily Rate of Flow)}}$$

ASSUMPTIONS	AMOUNT
Water Production:	
Peak Day (MGD)	17.4
Peak Month (MGD)	12.6
Water Billings:	
System Maximum Month (Millions of Gallons)	203.7
System Average Month (Millions of Gallons)	122.36
Estimated Peak Day Factor	2.29
1984 Average Day Metered Usage (MGD)	4.02
Est. 1984 Peak Day Metered Usage (MGD)	9.21
Current Equivalent Meters	14,670
Estimated Peak Day Consumption Per Equivalent Meter (Gallons)	628
Water System Cost Basis:	
Option A	$20,567,270
Option B	$12,837,270
Peak Day System Design Capacity (MGD)	20.8
Unit Cost Per Peak Day Design Demand	
Option A	$0.989
Option B	$0.617
Cost Per 5/8 x 3/4 inch equivalent meter	
Option A	$621
Option B	$387

System Peaking Factor

Because peak day metered water sales were unavailable, an estimate of the system peak-to-average usage factor was made. The method used to calculate this factor is based on a formula developed by CH2M HILL. This formula enables peak day factors for different customer classes or the system as a whole to be calculated. The formula multiplies the ratio of system peak day flow to system maximum month daily flow by the ratio of class maximum month flow to class average month flow to estimate the peak day factor. In this calculation system metered water sales are used in place of class demand data.

With the exception of system peak day water production, all water demand figures used in this calculation were based on 1984 water production and sales data. July 1985 peak day water production data was used because it represents the City's highest peak day production and it was used by the City in their calculations. Based on these data, the system peak day factor for metered water sales equals 2.29.

Consumption Per Equivalent Meter

In 1984 metered water sales equalled 4.02 MGD per day. Based on the estimated peak day factor, peak day metered water sales are estimated to total 9.21 MGD. Using the City's estimate of 14,670 equivalent meters, peak day metered consumption per equivalent meter is estimated to total 628 gallons. This represents the average peak day capacity demand for each equivalent meter. This figure is substantially less than that used by the City in the preceding alternatives because it is net of lost and unaccounted for water.

COST PER EQUIVALENT METER

The cost per gallon of peak day capacity can be calculated based on the water system's cost basis. The Option A cost basis equals $20,567,270 and results in a cost per gallon of peak day capacity of $0.989. The Option B cost basis equals $12,837,270 and results in a cost per gallon of peak day capacity of $0.617. Per equivalent meter peak day metered water demand is estimated to total 628 gallons. This results in a per equivalent meter SDC of $621 under Option A and $387 under Option B.

Table 3 shows a schedule of charges by meter size for each option. Under Option A, the SDC would range between $621 and $55,890 depending on meter size. Option B charges range from $387 to $34,830, depending on meter size.

These charges are based on an estimate of system replacement values. As discussed earlier, the replacement cost valuation methodology has been subject to legal challenge. For this reason, the City may wish to evaluate an SDC that is based solely on original asset cost.

TABLE 3
CITY OF HELENA
SCHEDULE OF SYSTEM DEVELOPMENT CHARGES BY METER SIZE
PROPOSED CH2M HILL ALTERNATIVE

METER SIZE	FACTOR	OPTION A	OPTION B
5/8 x 3/4	1	$621	$387
3/4	1.5	$932	$581
1	2.5	$1,553	$968
1-1/2	5	$3,105	$1,935
2	8	$4,968	$3,096
3	15	$9,315	$5,805
4	25	$15,525	$9,675
6	50	$31,050	$19,350
8	90	$55,890	$34,830

SUMMARY AND RECOMMENDATIONS

It is clear that there are a number of different methods available for calculating a SDC. Some methods are more reasonable than others. Some approaches, while sound from a theoretical viewpoint, are more difficult to justify when viewed in light of how utilities actually supply service and use their facilities over time. As a minimum the methodology should be:

1. Based on actual data
2. Be verifiable
3. Yield consistent and equitable results
4. Be defensible

It is not unusual for opponents of an SDC, usually those persons being asked to pay, to challenge the charge. For these reasons, CH2M HILL generally recommends that a cost-of-service approach, like that presented in the Appendix, be used. If this is not possible, it is a good policy to choose a more conservative methodology to avoid exposing the City to legal challenge.

A SDC will help the City of Helena finance needed facilities. It is an important way for the City to broaden its revenue base while improving equity between current and future users. However, revenues generated from such a charge should be used for their intended purpose; defraying capital costs. Since the charge is related to the cost of capacity, SDC revenues are best used to finance the cost of capacity-related facilities or to retire debt service on bonds sold to finance such facilities. SDC revenues should generally not be used to finance the replacement of facilities that will only serve existing customers. Under no circumstances should SDC revenues be used to finance the general operating costs of the water utility.

APPENDIX C

CONTENTS

Alternative

1A No Build - Annual Rate Increases
1B No Bould - One Rate Increase
2A Revenue Bonds - No Grants - Annual Rate Increase
2B Revenue Bonds - No Grants - One Rate Increase
3A Revenue Bonds - With Grants - Annual Rate Increase
3B Revenue Bonds - With Grants - One Rate Increase
4A State Loan - No Subsidy - Annual Rate Increase
4B State Loan - No Subsidy - One Rate Increase
5A Subsidized DNRC Loan - Annual Rate Increase
5B Subsidized DNRC Loan - One Rate Increase
6A General Obligation Bond - Annual Rate Increase
6B General Obligation Bond - One Rate Increase

Alternative 1A

ALTERNATIVE 1 - NO BUILD - ANNUAL RATE INCREASES

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$970,632	$0	$0	$0	$0	$0
Other CIP - SDC Funds	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$409,309	$504,490	$504,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$0	$0	$0	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$104,490	$104,490	$104,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1995 20	Interest Rate (%)	8.50%	Discount Percent	3.00%	Selling Costs	$60,000
Estimated Annual New Debt Service............		$0	Bond Issue Size.......	$0	Debt Reserve	10.29%	Bond Proceeds	$0

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$0	$0	$0	$0

File Date: 16-May-86

ALTERNATIVE 1 - NO BUILD - ANNUAL RATE INCREASES

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$8.50	$9.04	$9.22	$9.36	$9.47
1"	$18.70	$18.70	$18.70	$19.90	$20.27	$20.60	$20.83
1-1/2"	$24.36	$24.36	$24.36	$25.92	$26.41	$26.83	$27.13
2"	$31.17	$31.17	$31.17	$33.16	$33.80	$34.34	$34.71
3"	$69.70	$69.70	$69.70	$74.16	$75.57	$76.78	$77.62
4"	$108.23	$108.23	$108.23	$115.16	$117.34	$119.22	$120.53
6"	$108.23	$108.23	$108.23	$115.16	$117.34	$119.22	$120.53
8"	$108.23	$108.23	$108.23	$115.16	$117.34	$119.22	$120.53
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$8.50	$9.04	$9.22	$9.36	$9.47
2 Next 95 HCF	$1.22	$1.22	$1.22	$1.30	$1.32	$1.34	$1.36
3 All Additional	$1.11	$1.11	$1.11	$1.18	$1.20	$1.22	$1.24
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.29	$4.57	$4.65	$4.73	$4.78
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$8.50	$9.04	$9.22	$9.36	$9.47
21 HCF	$28.02	$28.02	$28.02	$29.81	$30.38	$30.87	$31.21
75 HCF	$93.90	$93.90	$93.90	$99.91	$101.81	$103.44	$104.57
Commercial							
85 HCF	$106.10	$106.10	$106.10	$112.89	$115.04	$116.88	$118.16
133 HCF	$161.03	$161.03	$161.03	$171.34	$174.59	$177.38	$179.34
1000 HCF	$1,123.40	$1,123.40	$1,123.40	$1,195.30	$1,218.01	$1,237.50	$1,251.11
2000 HCF	$2,233.40	$2,233.40	$2,233.40	$2,376.34	$2,421.49	$2,460.23	$2,487.29

File Date: 16-May-86 ALTERNATIVE 1 - NO BUILD - ANNUAL RATE INCREASES

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$1,997,271	$2,003,160	$2,006,010	$2,007,854
User Charge Revenues	$2,243,746	$2,161,214	$2,184,715	$2,349,541	$2,419,662	$2,484,264	$2,537,763
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$2,407,135	$2,571,961	$2,642,082	$2,706,684	$2,760,183
Interest Income 7.0%	$177,882	$241,667	$178,290	$181,723	$182,215	$182,485	$182,694
Bond Proceeds	$1,496,568	$0	$0	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$4,581,990	$4,750,955	$4,827,457	$4,895,179	$4,950,731
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,504,845	$1,556,060
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$0	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$0	$0	$0	$0
Capital Expenditures	$245,219	$1,275,451	$409,309	$504,490	$504,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$2,584,719	$2,747,795	$2,821,446	$2,887,325	$2,939,465
Transfers To Construction	$553,426	$0	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$1,997,271	$2,003,160	$2,006,010	$2,007,854	$2,011,266
Revenue Bond Account	$506,000	$506,000	$506,000	$506,000	$506,000	$506,000	$506,000
Construction Account	$1,496,568	$525,936	$525,936	$525,936	$525,936	$525,936	$525,936
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$125,404	$129,672
Accounts Receivable	$337,092	$324,182	$327,707	$352,431	$362,949	$372,640	$380,664
Cash For Bond Payment	$154,962	$177,148	$165,318	$165,271	$166,374	$167,002	$167,178
Available Reserve	$362,376	$358,255	$363,453	$338,988	$324,562	$310,873	$301,816
Total Requirements	$6,841,088	$5,463,886	$4,581,990	$4,750,955	$4,827,457	$4,895,179	$4,950,731

Alternative 2A

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP - SDC Funds	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year	1987	Interest Rate (%)	8.50%	Discount Percent	3.00%	Selling Costs	$60,000
	Term......	20						
Estimated Annual New Debt Service............		$1,128,003	Bond Issue Size.......	$10,674,668	Debt Reserve	10.29%	Bond Proceeds	$9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$564,001	$1,128,003	$1,128,003	$1,128,003

File Date: 16-May-86 ALTERNATIVE 2A - REVENUE BOND - NO GRANTS - ANNUAL RATE INCREASES

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$564,001	$1,128,003	$1,128,003	$1,128,003
Bond Selling Costs	$0	$0	$380,240	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,736,943	$8,353,587	$7,057,449	$3,921,328	$3,970,233
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$380,240	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$178,290	$802,949	$513,208	$314,911	$326,468
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,552,934	$6,067,160	$3,843,628	$537,331	$548,888
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,184,009	$2,286,427	$3,213,820	$3,383,997	$3,421,344
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$2,184,715	$3,053,961	$3,392,022	$3,554,568	$3,591,608
Surplus/Deficit(-)	$747	$24,122	$705	$767,534	$178,202	$170,571	$170,264
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$10,519,715	$6,245,459	$3,315,661	$3,486,232	$3,656,496
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	1.26	1.26	1.26	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	0.000%	38.300%	9.900%	3.700%	0.000%

File Date: 16-May-86 ALTERNATIVE 2A - REVENUE BOND - NO GRANTS - ANNUAL RATE INCREASES

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$8.50	$11.76	$12.92	$13.40	$13.40
1"	$18.70	$18.70	$18.70	$25.86	$28.42	$29.47	$29.47
1-1/2"	$24.36	$24.36	$24.36	$33.69	$37.03	$38.40	$38.40
2"	$31.17	$31.17	$31.17	$43.11	$47.38	$49.13	$49.13
3"	$69.70	$69.70	$69.70	$96.40	$105.94	$109.86	$109.86
4"	$108.23	$108.23	$108.23	$149.68	$164.50	$170.59	$170.59
6"	$108.23	$108.23	$108.23	$149.68	$164.50	$170.59	$170.59
8"	$108.23	$108.23	$108.23	$149.68	$164.50	$170.59	$170.59
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$8.50	$11.76	$12.92	$13.40	$13.40
2 Next 95 HCF	$1.22	$1.22	$1.22	$1.69	$1.85	$1.92	$1.92
3 All Additional	$1.11	$1.11	$1.11	$1.54	$1.69	$1.75	$1.75
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.29	$5.94	$6.53	$6.77	$6.77
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$8.50	$11.76	$12.92	$13.40	$13.40
21 HCF	$28.02	$28.02	$28.02	$38.75	$42.59	$44.16	$44.16
75 HCF	$93.90	$93.90	$93.90	$129.86	$142.72	$148.00	$148.00
Commercial							
85 HCF	$106.10	$106.10	$106.10	$146.74	$161.26	$167.23	$167.23
133 HCF	$161.03	$161.03	$161.03	$222.70	$244.75	$253.81	$253.81
1000 HCF	$1,123.40	$1,123.40	$1,123.40	$1,553.66	$1,707.47	$1,770.65	$1,770.65
2000 HCF	$2,233.40	$2,233.40	$2,233.40	$3,088.79	$3,394.58	$3,520.18	$3,520.18

File Date: 16-May-86

ALTERNATIVE 2A - REVENUE BOND - NO GRANTS - ANNUAL RATE INCREASES

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources		Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance		$2,096,760	$2,943,075	$1,996,565	$10,519,715	$6,245,459	$3,315,661	$3,486,232
User Charge Revenues		$2,243,746	$2,161,214	$2,184,715	$3,053,961	$3,392,022	$3,554,568	$3,591,608
Fire Hydrant Charges		$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges		$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting		$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges		$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues		$2,346,509	$2,279,144	$2,407,135	$3,276,381	$3,614,442	$3,776,988	$3,814,028
Interest Income	7.0%	$177,882	$241,667	$178,290	$802,949	$513,208	$314,911	$326,468
Bond Proceeds		$1,496,568	$0	$10,674,668	$0	$0	$0	$0
Refunding		$559,156	$0	$0	$0	$0	$0	$0
Grants		$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds		$164,213	$0	$0	$0	$0	$0	$0
Total Resources		$6,841,088	$5,463,886	$15,256,658	$14,599,046	$10,373,110	$7,407,560	$7,626,729
Requirements								
Operation and Maintenance		$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing		$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs		$0	$0	$380,240	$0	$0	$0	$0
Debt Service New		$0	$0	$0	$564,001	$1,128,003	$1,128,003	$1,128,003
Capital Expenditures		$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal		$3,327,816	$3,467,320	$4,736,943	$8,353,587	$7,057,449	$3,921,328	$3,970,233
Transfers To Construction		$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds		$16,771	$0	$0	$0	$0	$0	$0
Ending Balance		$2,943,075	$1,996,565	$10,519,715	$6,245,459	$3,315,661	$3,486,232	$3,656,496
Revenue Bond Account		$506,000	$506,000	$1,605,000	$1,605,000	$1,605,000	$1,605,000	$1,605,000
Construction Account		$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve		$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable		$337,092	$324,182	$327,707	$458,094	$508,803	$533,185	$538,741
Cash For Bond Payment		$154,962	$177,148	$165,318	$272,549	$380,930	$381,558	$381,734
Available Reserve		$362,376	$158,255	$163,043	$687,281	$700,739	$848,919	$1,009,452
Total Requirements		$6,841,088	$5,663,886	$15,256,658	$14,599,046	$10,373,110	$7,407,560	$7,626,729

Alternative 3A

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS: Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$350,000	$0	$0	$0	$0
State Grant	$0	$0	$100,000	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,321,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS: CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1987 20	Interest Rate (%)	8.50%	Discount Percent	3.00%	Selling Costs	$60,000
Estimated Annual New Debt Service...........	$1,073,161	Bond Issue Size.......	$10,155,688	Debt Reserve	10.29%	Bond Proceeds	$8,745,838	

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$536,581	$1,073,161	$1,073,161	$1,073,161

File Date: 16-May-86 ALTERNATIVE 3A - REVENUE BOND WITH GRANTS - ANNUAL RATE INCREASES

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$536,581	$1,073,161	$1,073,161	$1,073,161
Bond Selling Costs	$0	$0	$364,671	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,721,373	$8,326,166	$7,002,608	$3,866,487	$3,915,391
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,321,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$364,671	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$178,290	$796,969	$504,421	$305,234	$315,836
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$350,000	$0	$0	$0	$0
State Grant	$0	$0	$100,000	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,537,364	$6,061,180	$3,834,841	$527,654	$538,256
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,184,009	$2,264,986	$3,167,766	$3,338,833	$3,377,135
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$2,184,715	$2,989,923	$3,332,982	$3,496,067	$3,532,497
Surplus/Deficit(-)	$747	$24,122	$705	$724,937	$165,216	$157,234	$155,362
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$10,466,304	$6,149,450	$3,206,666	$3,363,900	$3,519,262
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	1.26	1.26	1.26	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	0.000%	35.400%	10.300%	3.800%	0.000%

File Date: 16-May-86 ALTERNATIVE 3A - REVENUE BOND WITH GRANTS - ANNUAL RATE INCREASES

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$8.50	$11.51	$12.69	$13.18	$13.18
1"	$18.70	$18.70	$18.70	$25.32	$27.93	$28.99	$28.99
1-1/2"	$24.36	$24.36	$24.36	$32.98	$36.38	$37.76	$37.76
2"	$31.17	$31.17	$31.17	$42.20	$46.55	$48.32	$48.32
3"	$69.70	$69.70	$69.70	$94.37	$104.09	$108.05	$108.05
4"	$108.23	$108.23	$108.23	$146.54	$161.64	$167.78	$167.78
6"	$108.23	$108.23	$108.23	$146.54	$161.64	$167.78	$167.78
8"	$108.23	$108.23	$108.23	$146.54	$161.64	$167.78	$167.78
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$8.50	$11.51	$12.69	$13.18	$13.18
2 Next 95 HCF	$1.22	$1.22	$1.22	$1.65	$1.82	$1.89	$1.89
3 All Additional	$1.11	$1.11	$1.11	$1.50	$1.66	$1.72	$1.72
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.29	$5.81	$6.41	$6.66	$6.66
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$8.50	$11.51	$12.69	$13.18	$13.18
21 HCF	$28.02	$28.02	$28.02	$37.94	$41.85	$43.44	$43.44
75 HCF	$93.90	$93.90	$93.90	$127.14	$140.24	$145.57	$145.57
Commercial							
85 HCF	$106.10	$106.10	$106.10	$143.66	$158.46	$164.48	$164.48
133 HCF	$161.03	$161.03	$161.03	$218.03	$240.49	$249.63	$249.63
1000 HCF	$1,123.40	$1,123.40	$1,123.40	$1,521.08	$1,677.76	$1,741.51	$1,741.51
2000 HCF	$2,233.40	$2,233.40	$2,233.40	$3,024.02	$3,335.50	$3,462.25	$3,462.25

File Date: 16-May-86 ALTERNATIVE 3A - REVENUE BOND WITH GRANTS - ANNUAL RATE INCREASES

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$10,466,304	$6,149,450	$3,206,666	$3,363,900
User Charge Revenues	$2,243,746	$2,161,214	$2,184,715	$2,989,923	$3,332,982	$3,496,067	$3,532,497
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$2,407,135	$3,212,343	$3,555,402	$3,718,487	$3,754,917
Interest Income 7.0%	$177,882	$241,667	$178,290	$796,969	$504,421	$305,234	$315,836
Bond Proceeds	$1,496,568	$0	$10,155,688	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$450,000	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$15,187,678	$14,475,616	$10,209,274	$7,230,387	$7,434,654
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$364,671	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$536,581	$1,073,161	$1,073,161	$1,073,161
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,721,373	$8,326,166	$7,002,608	$3,866,487	$3,915,391
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$10,466,304	$6,149,450	$3,206,666	$3,363,900	$3,519,262
Revenue Bond Account	$506,000	$506,000	$1,551,000	$1,551,000	$1,551,000	$1,551,000	$1,551,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$327,707	$448,488	$499,947	$524,410	$529,875
Cash For Bond Payment	$154,962	$177,148	$165,318	$267,333	$370,499	$371,127	$371,303
Available Reserve	$362,376	$158,255	$163,632	$660,094	$665,031	$799,793	$945,517
Total Requirements	$6,841,088	$5,663,886	$15,187,678	$14,475,616	$10,209,274	$7,230,387	$7,434,654

Alternative 4A

File Date: 16-May-86 ALTERNATIVE 4A - STATE LOAN - NO SUBSIDY - ANNUAL RATE INCREASES

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1987 20	Interest Rate (%)	8.50%	Discount Percent	3.00%	Selling Costs	$2,000
Estimated Annual New Debt Service............		$1,058,138	Bond Issue Size.......	$10,013,518	Debt Reserve	5.15%	Bond Proceeds	$9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$529,069	$1,058,138	$1,058,138	$1,058,138

File Date: 16-May-86 ALTERNATIVE 4A - STATE LOAN - NO SUBSIDY - ANNUAL RATE INCREASES

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Interim Financing	$0	$0	$93,446	$83,446	$0	$0	$0
New Debt Service	$0	$0	$0	$529,069	$1,058,138	$1,058,138	$1,058,138
Bond Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,752,554	$8,402,100	$6,987,584	$3,851,463	$3,900,368
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$181,578	$760,610	$461,513	$261,980	$272,142
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,478,387	$6,024,820	$3,791,933	$484,400	$494,562
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,274,167	$2,377,280	$3,195,652	$3,367,064	$3,405,806
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$2,278,657	$3,003,331	$3,357,035	$3,517,904	$3,554,562
Surplus/Deficit(-)	$747	$24,122	$4,490	$626,052	$161,383	$150,840	$148,756
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$9,940,184	$5,524,445	$2,577,828	$2,728,668	$2,877,424
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	1.36	1.26	1.26	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	4.300%	30.400%	10.600%	3.700%	0.000%

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$8.87	$11.56	$12.79	$13.26	$13.26
1"	$18.70	$18.70	$19.50	$25.43	$28.13	$29.17	$29.17
1-1/2"	$24.36	$24.36	$25.41	$33.13	$36.64	$38.00	$38.00
2"	$31.17	$31.17	$32.51	$42.39	$46.89	$48.62	$48.62
3"	$69.70	$69.70	$72.70	$94.80	$104.85	$108.72	$108.72
4"	$108.23	$108.23	$112.88	$147.20	$162.80	$168.83	$168.83
6"	$108.23	$108.23	$112.88	$147.20	$162.80	$168.83	$168.83
8"	$108.23	$108.23	$112.88	$147.20	$162.80	$168.83	$168.83
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$8.87	$11.56	$12.79	$13.26	$13.26
2 Next 95 HCF	$1.22	$1.22	$1.27	$1.66	$1.84	$1.90	$1.90
3 All Additional	$1.11	$1.11	$1.16	$1.51	$1.67	$1.73	$1.73
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.48	$5.84	$6.46	$6.70	$6.70
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$8.87	$11.56	$12.79	$13.26	$13.26
21 HCF	$28.02	$28.02	$29.22	$38.11	$42.15	$43.71	$43.71
75 HCF	$93.90	$93.90	$97.94	$127.71	$141.25	$146.47	$146.47
Commercial							
85 HCF	$106.10	$106.10	$110.66	$144.30	$159.60	$165.51	$165.51
133 HCF	$161.03	$161.03	$167.95	$219.01	$242.23	$251.19	$251.19
1000 HCF	$1,123.40	$1,123.40	$1,171.71	$1,527.90	$1,689.86	$1,752.39	$1,752.39
2000 HCF	$2,233.40	$2,233.40	$2,329.44	$3,037.58	$3,359.57	$3,483.87	$3,483.87

File Date: 16-May-86 ALTERNATIVE 4A - STATE LOAN - NO SUBSIDY - ANNUAL RATE INCREASES

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources		Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance		$2,096,760	$2,943,075	$1,996,565	$9,940,184	$5,524,445	$2,577,828	$2,728,668
User Charge Revenues		$2,243,746	$2,161,214	$2,278,657	$3,003,331	$3,357,035	$3,517,904	$3,554,562
Fire Hydrant Charges		$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges		$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting		$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges		$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues		$2,346,509	$2,279,144	$2,501,077	$3,225,751	$3,579,455	$3,740,324	$3,776,982
Interest Income	7.0%	$177,882	$241,667	$181,578	$760,610	$461,513	$261,980	$272,142
Bond Proceeds		$1,496,568	$0	$10,013,518	$0	$0	$0	$0
Refunding		$559,156	$0	$0	$0	$0	$0	$0
Grants		$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds		$164,213	$0	$0	$0	$0	$0	$0
Total Resources		$6,841,088	$5,463,886	$14,692,738	$13,926,545	$9,565,412	$6,580,131	$6,777,792
Requirements								
Operation and Maintenance		$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing		$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs		$0	$0	$302,406	$0	$0	$0	$0
Debt Service New		$0	$0	$0	$529,069	$1,058,138	$1,058,138	$1,058,138
Interim Financing		$0	$0	$93,446	$83,446	$0	$0	$0
Capital Expenditures		$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal		$3,327,816	$3,467,320	$4,752,554	$8,402,100	$6,987,584	$3,851,463	$3,900,368
Transfers To Construction		$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds		$16,771	$0	$0	$0	$0	$0	$0
Ending Balance		$2,943,075	$1,996,565	$9,940,184	$5,524,445	$2,577,828	$2,728,668	$2,877,424
Revenue Bond Account		$506,000	$506,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000
Construction Account		$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve		$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable		$337,092	$324,182	$341,799	$450,500	$503,555	$527,686	$533,184
Cash For Bond Payment		$154,962	$177,148	$165,318	$265,904	$367,641	$368,269	$368,445
Available Reserve		$362,376	$158,255	$153,420	$564,506	$565,442	$694,143	$833,226
Total Requirements		$6,841,088	$5,663,886	$14,692,738	$13,926,545	$9,565,412	$6,580,131	$6,777,792

Alternative 5A

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP - SDC Funds	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1987 20	Interest Rate (%)	6.50%	Discount Percent	3.00%	Selling Costs $2,000
Estimated Annual New Debt Service............		$908,791	Bond Issue Size.......	$10,013,518	Debt Reserve	5.15%	Bond Proceeds $9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$454,395	$908,791	$908,791	$908,791

ile Date: 16-May-86

ALTERNATIVE 5A - SUBSIDIZED DNRC LOAN - ANNUAL RATE INCREASES

able 7
ity of Helena
orecast System Annual Cost and
evenues Required From Rates
iscal Years Ending June 30th

evenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
ater Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
ater M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
ld Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
IP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
nterim Financing	$0	$0	$93,446	$83,446	$0	$0	$0
ew Debt Service	$0	$0	$0	$454,395	$908,791	$908,791	$908,791
ond Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
ransfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
nnual System Cost	$3,344,587	$3,467,320	$4,752,554	$8,327,427	$6,838,237	$3,702,116	$3,751,021
ESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$181,578	$754,080	$447,221	$245,298	$253,006
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,478,387	$6,018,291	$3,777,641	$467,718	$475,426
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,274,167	$2,309,136	$3,060,596	$3,234,398	$3,275,595
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$2,278,657	$2,816,775	$3,185,515	$3,351,041	$3,385,961
Surplus/Deficit(-)	$747	$24,122	$4,490	$507,639	$124,919	$116,643	$110,366
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$9,940,184	$5,406,032	$2,422,951	$2,539,594	$2,649,960
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	1.36	1.26	1.26	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	4.300%	22.300%	11.900%	4.100%	0.000%

File = HELRM5

File Date: 16-May-86 ALTERNATIVE 5A - SUBSIDIZED DNRC LOAN - ANNUAL RATE INCREASES

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$8.87	$10.84	$12.13	$12.63	$12.63
1"	$18.70	$18.70	$19.50	$23.85	$26.69	$27.79	$27.79
1-1/2"	$24.36	$24.36	$25.41	$31.07	$34.77	$36.20	$36.20
2"	$31.17	$31.17	$32.51	$39.76	$44.49	$46.32	$46.32
3"	$69.70	$69.70	$72.70	$88.91	$99.49	$103.57	$103.57
4"	$108.23	$108.23	$112.88	$138.06	$154.49	$160.82	$160.82
6"	$108.23	$108.23	$112.88	$138.06	$154.49	$160.82	$160.82
8"	$108.23	$108.23	$112.88	$138.06	$154.49	$160.82	$160.82
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$8.87	$10.84	$12.13	$12.63	$12.63
2 Next 95 HCF	$1.22	$1.22	$1.27	$1.56	$1.74	$1.81	$1.81
3 All Additional	$1.11	$1.11	$1.16	$1.42	$1.58	$1.65	$1.65
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.48	$5.48	$6.13	$6.38	$6.38
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$8.87	$10.84	$12.13	$12.63	$12.63
21 HCF	$28.02	$28.02	$29.22	$35.74	$40.00	$41.64	$41.64
75 HCF	$93.90	$93.90	$97.94	$119.78	$134.03	$139.53	$139.53
Commercial							
85 HCF	$106.10	$106.10	$110.66	$135.34	$151.45	$157.65	$157.65
133 HCF	$161.03	$161.03	$167.95	$205.41	$229.85	$239.28	$239.28
1000 HCF	$1,123.40	$1,123.40	$1,171.71	$1,433.00	$1,603.52	$1,669.27	$1,669.27
2000 HCF	$2,233.40	$2,233.40	$2,329.44	$2,848.90	$3,187.92	$3,318.62	$3,318.62

File = HELRM5

File Date: 16-May-86

ALTERNATIVE 5A - SUBSIDIZED DNRC LOAN - ANNUAL RATE INCREASES

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$9,940,184	$5,406,032	$2,422,951	$2,539,594
User Charge Revenues	$2,243,746	$2,161,214	$2,278,657	$2,816,775	$3,185,515	$3,351,041	$3,385,961
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$2,501,077	$3,039,195	$3,407,935	$3,573,461	$3,608,381
Interest Income 7.0%	$177,882	$241,667	$181,578	$754,080	$447,221	$245,298	$253,006
Bond Proceeds	$1,496,568	$0	$10,013,518	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$14,692,738	$13,733,459	$9,261,188	$6,241,710	$6,400,981
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$302,406	$0	$0	$0	$0
Interim Financing	$0	$0	$93,446	$83,446	$0	$0	$0
Debt Service New	$0	$0	$0	$454,395	$908,791	$908,791	$908,791
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,752,554	$8,327,427	$6,838,237	$3,702,116	$3,751,021
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$9,940,184	$5,406,032	$2,422,951	$2,539,594	$2,649,960
Revenue Bond Account	$506,000	$506,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$341,799	$422,516	$477,827	$502,656	$507,894
Cash For Bond Payment	$154,962	$177,148	$165,318	$251,701	$339,234	$339,862	$340,038
Available Reserve	$362,376	$158,255	$153,420	$488,281	$464,701	$558,506	$659,460
Total Requirements	$6,841,088	$5,663,886	$14,692,738	$13,733,459	$9,261,188	$6,241,710	$6,400,981

File = HELRM5

Alternative 6A

File Date: 16-May-86 ALTERNATIVE 6A - G. O. BOND - ANNUAL RATE INCREASES

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1987 20	Interest Rate (%)	7.50%	Discount Percent	3.00%	Selling Costs	$70,000
Estimated Annual New Debt Service............		$989,510	Bond Issue Size.......	$10,087,548	Debt Reserve	5.15%	Bond Proceeds	$9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$494,755	$989,510	$989,510	$989,510

File = HELRM6

File Date: 16-May-86

ALTERNATIVE 6A - G. O. BOND - ANNUAL RATE INCREASES

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$494,755	$989,510	$989,510	$989,510
Bond Selling Costs	$0	$0	$372,626	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,729,329	$8,284,340	$6,918,956	$3,782,835	$3,831,740
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$372,626	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$178,290	$735,565	$412,735	$204,331	$205,041
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,545,320	$5,999,775	$3,743,155	$426,751	$427,461
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,184,009	$2,284,565	$3,175,801	$3,356,084	$3,404,279
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$2,184,715	$2,287,711	$3,209,136	$3,372,646	$3,407,790
Surplus/Deficit(-)	$747	$24,122	$705	$3,146	$33,334	$16,561	$3,511
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$9,940,209	$4,901,564	$1,826,898	$1,843,460	$1,846,971
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	1.26	1.85	2.38	2.36	2.35
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	0.000%	3.600%	38.800%	4.000%	0.000%

File Date: 16-May-86 ALTERNATIVE 6A - G. O. BOND - ANNUAL RATE INCREASES

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$8.50	$8.81	$12.22	$12.71	$12.71
1"	$18.70	$18.70	$18.70	$19.37	$26.89	$27.97	$27.97
1-1/2"	$24.36	$24.36	$24.36	$25.24	$35.03	$36.43	$36.43
2"	$31.17	$31.17	$31.17	$32.29	$44.82	$46.61	$46.61
3"	$69.70	$69.70	$69.70	$72.21	$100.23	$104.24	$104.24
4"	$108.23	$108.23	$108.23	$112.13	$155.63	$161.86	$161.86
6"	$108.23	$108.23	$108.23	$112.13	$155.63	$161.86	$161.86
8"	$108.23	$108.23	$108.23	$112.13	$155.63	$161.86	$161.86
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$8.50	$8.81	$12.22	$12.71	$12.71
2 Next 95 HCF	$1.22	$1.22	$1.22	$1.26	$1.75	$1.82	$1.82
3 All Additional	$1.11	$1.11	$1.11	$1.15	$1.60	$1.66	$1.66
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.29	$4.45	$6.17	$6.42	$6.42
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$8.50	$8.81	$12.22	$12.71	$12.71
21 HCF	$28.02	$28.02	$28.02	$29.03	$40.29	$41.90	$41.90
75 HCF	$93.90	$93.90	$93.90	$97.28	$135.03	$140.43	$140.43
Commercial							
85 HCF	$106.10	$106.10	$106.10	$109.92	$152.57	$158.67	$158.67
133 HCF	$161.03	$161.03	$161.03	$166.83	$231.56	$240.82	$240.82
1000 HCF	$1,123.40	$1,123.40	$1,123.40	$1,163.84	$1,615.41	$1,680.03	$1,680.03
2000 HCF	$2,233.40	$2,233.40	$2,233.40	$2,313.80	$3,211.56	$3,340.02	$3,340.02

File = HELRM6

File Date: 16-May-86 ALTERNATIVE 6A - G. O. BOND - ANNUAL RATE INCREASES

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$9,940,209	$4,901,564	$1,826,898	$1,843,460
User Charge Revenues	$2,243,746	$2,161,214	$2,184,715	$2,287,711	$3,209,136	$3,372,646	$3,407,790
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$2,407,135	$2,510,131	$3,431,556	$3,595,066	$3,630,210
Interest Income 7.0%	$177,882	$241,667	$178,290	$735,565	$412,735	$204,331	$205,041
Bond Proceeds	$1,496,568	$0	$10,087,548	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$14,669,538	$13,185,904	$8,745,854	$5,626,294	$5,678,711
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$372,626	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$494,755	$989,510	$989,510	$989,510
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,729,329	$8,284,340	$6,918,956	$3,782,835	$3,831,740
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$9,940,209	$4,901,564	$1,826,898	$1,843,460	$1,846,971
Revenue Bond Account	$506,000	$506,000	$1,025,000	$1,025,000	$1,025,000	$1,025,000	$1,025,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$327,707	$343,157	$481,370	$505,897	$511,169
Cash For Bond Payment	$154,962	$177,148	$165,318	$259,378	$354,588	$355,215	$355,391
Available Reserve	$362,376	$158,255	$163,536	$51,495	($154,249)	($160,223)	($166,158)
Total Requirements	$6,841,088	$5,663,886	$14,669,538	$13,185,904	$8,745,854	$5,626,294	$5,678,711

File = HELRM6

Alternative 1B

File Date: 16-May-86 ALTERNATIVE 1B - NO BUILD - ONE RATE INCREASE

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0
Legal/Administrative	$0	$0	$0	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$970,632	$0	$0	$0	$0	$0
Other CIP - SDC Funds	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$409,309	$504,490	$504,490	$504,490	$504,490
LESS: Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$0	$0	$0	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$104,490	$104,490	$104,490	$104,490	$104,490
EQUALS: CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions
Issue Year 1995
Term...... 20
Interest Rate (%) 8.50%
Discount Percent 3.00%
Selling Costs $60,000

Estimated Annual New Debt Service........... $0
Bond Issue Size....... $0
Debt Reserve 10.29%
Bond Proceeds $0

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$0	$0	$0	$0

File = HELRM1B

File Date: 16-May-86 ALTERNATIVE 1B - NO BUILD - ONE RATE INCREASE

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,375,360	$1,422,690
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$409,309	$504,490	$504,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$0	$0	$0	$0
Bond Selling Costs	$0	$0	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Transfers To Construction	$553,426	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,898,013	$3,467,320	$2,584,719	$2,747,795	$2,821,446	$2,887,325	$2,939,465
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$0	$0	$0	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$0	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Refunding	$559,156	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$186,166	$201,040	$207,366	$210,977	$212,442
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,655,014	$1,330,229	$408,586	$423,460	$429,786	$433,397	$434,862
EQUALS: Required Revenues from Retail Rates	$2,242,399	$2,137,092	$2,176,133	$2,324,334	$2,391,660	$2,453,928	$2,504,603
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$2,409,740	$2,435,661	$2,461,582	$2,487,503	$2,513,424
Surplus/Deficit(-)	$747	$24,122	$233,607	$111,327	$69,922	$33,575	$8,822
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$2,230,172	$2,341,499	$2,411,421	$2,444,996	$2,453,818
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/Planned Rates		1.25	1.50	1.47	1.43	1.40	1.38
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	10.300%	0.000%	0.000%	0.000%	0.000%

File = HELRM1B

File Date: 16-May-86

ALTERNATIVE 1B - NO BUILD - ONE RATE INCREASE

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$9.38	$9.38	$9.38	$9.38	$9.38
1"	$18.70	$18.70	$20.63	$20.63	$20.63	$20.63	$20.63
1-1/2"	$24.36	$24.36	$26.87	$26.87	$26.87	$26.87	$26.87
2"	$31.17	$31.17	$34.38	$34.38	$34.38	$34.38	$34.38
3"	$69.70	$69.70	$76.88	$76.88	$76.88	$76.88	$76.88
4"	$108.23	$108.23	$119.38	$119.38	$119.38	$119.38	$119.38
6"	$108.23	$108.23	$119.38	$119.38	$119.38	$119.38	$119.38
8"	$108.23	$108.23	$119.38	$119.38	$119.38	$119.38	$119.38
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$9.38	$9.38	$9.38	$9.38	$9.38
2 Next 95 HCF	$1.22	$1.22	$1.35	$1.35	$1.35	$1.35	$1.35
3 All Additional	$1.11	$1.11	$1.22	$1.22	$1.22	$1.22	$1.22
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$4.74	$4.74	$4.74	$4.74	$4.74
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$9.38	$9.38	$9.38	$9.38	$9.38
21 HCF	$28.02	$28.02	$30.91	$30.91	$30.91	$30.91	$30.91
75 HCF	$93.90	$93.90	$103.57	$103.57	$103.57	$103.57	$103.57
Commercial							
85 HCF	$106.10	$106.10	$117.03	$117.03	$117.03	$117.03	$117.03
133 HCF	$161.03	$161.03	$177.62	$177.62	$177.62	$177.62	$177.62
1000 HCF	$1,123.40	$1,123.40	$1,239.11	$1,239.11	$1,239.11	$1,239.11	$1,239.11
2000 HCF	$2,233.40	$2,233.40	$2,463.44	$2,463.44	$2,463.44	$2,463.44	$2,463.44

File = HELRM1B

File Date: 16-May-86

ALTERNATIVE 1B - NO BUILD - ONE RATE INCREASE

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$2,230,172	$2,341,499	$2,411,421	$2,444,996
User Charge Revenues	$2,243,746	$2,161,214	$2,409,740	$2,435,661	$2,461,582	$2,487,503	$2,513,424
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$2,632,160	$2,658,081	$2,684,002	$2,709,923	$2,735,844
Interest Income 7.0%	$177,882	$241,667	$186,166	$201,040	$207,366	$210,977	$212,442
Bond Proceeds	$1,496,568	$0	$0	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$4,814,891	$5,089,294	$5,232,867	$5,332,322	$5,393,283
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,504,845	$1,556,060
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$0	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$0	$0	$0	$0
Capital Expenditures	$245,219	$1,275,451	$409,309	$504,490	$504,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$2,584,719	$2,747,795	$2,821,446	$2,887,325	$2,939,465
Transfers To Construction	$553,426	$0	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$2,230,172	$2,341,499	$2,411,421	$2,444,996	$2,453,818
Revenue Bond Account	$506,000	$506,000	$506,000	$506,000	$506,000	$506,000	$506,000
Construction Account	$1,496,568	$525,936	$525,936	$525,936	$525,936	$525,936	$525,936
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$125,404	$129,672
Accounts Receivable	$337,092	$324,182	$361,461	$365,349	$369,237	$373,125	$377,014
Cash For Bond Payment	$154,962	$177,148	$165,318	$165,271	$166,374	$167,002	$167,178
Available Reserve	$362,376	$358,255	$562,601	$664,409	$723,685	$747,530	$748,019
Total Requirements	$6,841,088	$5,463,886	$4,814,891	$5,089,294	$5,232,867	$5,332,322	$5,393,283

File = HELRM1B

Alternative 2B

File Date: 16-May-86 ALTERNATIVE 2B - REVENUE BOND - NO GRANTS - ONE RATE INCREASE

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP - SDC Funds	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1987 20	Interest Rate (%)	8.50%	Discount Percent	3.00%	Selling Costs $60,000
Estimated Annual New Debt Service...........		$1,128,003	Bond Issue Size.......	$10,674,668	Debt Reserve	10.29%	Bond Proceeds $9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$564,001	$1,128,003	$1,128,003	$1,128,003

File = HELRM2B

File Date: 16-May-86 ALTERNATIVE 2B - REVENUE BOND - NO GRANTS - ONE RATE INCREASE

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$564,001	$1,128,003	$1,128,003	$1,128,003
Bond Selling Costs	$0	$0	$380,240	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,736,943	$8,353,587	$7,057,449	$3,921,328	$3,970,233
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$380,240	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$218,281	$896,551	$624,424	$429,957	$441,132
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,592,925	$6,160,762	$3,954,844	$652,377	$663,552
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,144,018	$2,192,825	$3,102,605	$3,268,951	$3,306,680
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$3,327,320	$3,363,112	$3,398,903	$3,434,694	$3,470,485
Surplus/Deficit(-)	$747	$24,122	$1,183,302	$1,170,287	$296,298	$165,743	$163,805
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$11,702,312	$7,830,808	$5,019,106	$5,184,849	$5,348,654
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	2.43	1.45	1.31	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	52.300%	0.000%	0.000%	0.000%	0.000%

File Date: 16-May-86

ALTERNATIVE 2B - REVENUE BOND - NO GRANTS - ONE RATE INCREASE

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$12.95	$12.95	$12.95	$12.95	$12.95
1"	$18.70	$18.70	$28.48	$28.48	$28.48	$28.48	$28.48
1-1/2"	$24.36	$24.36	$37.10	$37.10	$37.10	$37.10	$37.10
2"	$31.17	$31.17	$47.47	$47.47	$47.47	$47.47	$47.47
3"	$69.70	$69.70	$106.15	$106.15	$106.15	$106.15	$106.15
4"	$108.23	$108.23	$164.83	$164.83	$164.83	$164.83	$164.83
6"	$108.23	$108.23	$164.83	$164.83	$164.83	$164.83	$164.83
8"	$108.23	$108.23	$164.83	$164.83	$164.83	$164.83	$164.83
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$12.95	$12.95	$12.95	$12.95	$12.95
2 Next 95 HCF	$1.22	$1.22	$1.86	$1.86	$1.86	$1.86	$1.86
3 All Additional	$1.11	$1.11	$1.69	$1.69	$1.69	$1.69	$1.69
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$6.54	$6.54	$6.54	$6.54	$6.54
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$12.95	$12.95	$12.95	$12.95	$12.95
21 HCF	$28.02	$28.02	$42.67	$42.67	$42.67	$42.67	$42.67
75 HCF	$93.90	$93.90	$143.01	$143.01	$143.01	$143.01	$143.01
Commercial							
85 HCF	$106.10	$106.10	$161.59	$161.59	$161.59	$161.59	$161.59
133 HCF	$161.03	$161.03	$245.25	$245.25	$245.25	$245.25	$245.25
1000 HCF	$1,123.40	$1,123.40	$1,710.94	$1,710.94	$1,710.94	$1,710.94	$1,710.94
2000 HCF	$2,233.40	$2,233.40	$3,401.47	$3,401.47	$3,401.47	$3,401.47	$3,401.47

File = HELRM2B

File Date: 16-May-86 ALTERNATIVE 2B - REVENUE BOND - NO GRANTS - ONE RATE INCREASE

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$11,702,312	$7,830,808	$5,019,106	$5,184,849
User Charge Revenues	$2,243,746	$2,161,214	$3,327,320	$3,363,112	$3,398,903	$3,434,694	$3,470,485
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$3,549,740	$3,585,532	$3,621,323	$3,657,114	$3,692,905
Interest Income 7.0%	$177,882	$241,667	$218,281	$896,551	$624,424	$429,957	$441,132
Bond Proceeds	$1,496,568	$0	$10,674,668	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$16,439,255	$16,184,395	$12,076,555	$9,106,177	$9,318,886
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$380,240	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$564,001	$1,128,003	$1,128,003	$1,128,003
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,736,943	$8,353,587	$7,057,449	$3,921,328	$3,970,233
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$11,702,312	$7,830,808	$5,019,106	$5,184,849	$5,348,654
Revenue Bond Account	$506,000	$506,000	$1,605,000	$1,605,000	$1,605,000	$1,605,000	$1,605,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$499,098	$504,467	$509,835	$515,204	$520,573
Cash For Bond Payment	$154,962	$177,148	$165,318	$272,549	$380,930	$381,558	$381,734
Available Reserve	$362,376	$158,255	$1,174,249	$2,226,258	$2,403,151	$2,565,516	$2,719,778
Total Requirements	$6,841,088	$5,663,886	$16,439,255	$16,184,395	$12,076,555	$9,106,177	$9,318,886

File = HELRM2B

Alternative 3B

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$350,000	$0	$0	$0	$0
State Grant	$0	$0	$100,000	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,321,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions	Issue Year Term......	1987 20	Interest Rate (%)	8.50%	Discount Percent	3.00%	Selling Costs	$60,000
Estimated Annual New Debt Service...........		$1,073,161	Bond Issue Size.......	$10,155,688	Debt Reserve	10.29%	Bond Proceeds	$8,745,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$536,581	$1,073,161	$1,073,161	$1,073,161

File Date: 16-May-86 ALTERNATIVE 3B - REVENUE BOND WITH GRANTS - ONE RATE INCREASE

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$536,581	$1,073,161	$1,073,161	$1,073,161
Bond Selling Costs	$0	$0	$364,671	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,721,373	$8,326,166	$7,002,608	$3,866,487	$3,915,391
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,321,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$364,671	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$216,446	$887,158	$612,564	$417,336	$427,659
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$350,000	$0	$0	$0	$0
State Grant	$0	$0	$100,000	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,575,520	$6,151,369	$3,942,984	$639,756	$650,079
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,145,853	$2,174,797	$3,059,624	$3,226,730	$3,265,313
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$3,274,887	$3,310,114	$3,345,342	$3,380,569	$3,415,796
Surplus/Deficit(-)	$747	$24,122	$1,129,034	$1,135,318	$285,718	$153,839	$150,484
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$11,594,633	$7,688,160	$4,865,877	$5,019,716	$5,170,199
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	2.38	1.46	1.31	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	49.900%	0.000%	0.000%	0.000%	0.000%

File = HELRM3B

File Date: 16-May-86 ALTERNATIVE 3B - REVENUE BOND WITH GRANTS - ONE RATE INCREASE

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$12.74	$12.74	$12.74	$12.74	$12.74
1"	$18.70	$18.70	$28.03	$28.03	$28.03	$28.03	$28.03
1-1/2"	$24.36	$24.36	$36.52	$36.52	$36.52	$36.52	$36.52
2"	$31.17	$31.17	$46.72	$46.72	$46.72	$46.72	$46.72
3"	$69.70	$69.70	$104.48	$104.48	$104.48	$104.48	$104.48
4"	$108.23	$108.23	$162.24	$162.24	$162.24	$162.24	$162.24
6"	$108.23	$108.23	$162.24	$162.24	$162.24	$162.24	$162.24
8"	$108.23	$108.23	$162.24	$162.24	$162.24	$162.24	$162.24
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$12.74	$12.74	$12.74	$12.74	$12.74
2 Next 95 HCF	$1.22	$1.22	$1.83	$1.83	$1.83	$1.83	$1.83
3 All Additional	$1.11	$1.11	$1.66	$1.66	$1.66	$1.66	$1.66
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$6.44	$6.44	$6.44	$6.44	$6.44
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$12.74	$12.74	$12.74	$12.74	$12.74
21 HCF	$28.02	$28.02	$42.00	$42.00	$42.00	$42.00	$42.00
75 HCF	$93.90	$93.90	$140.76	$140.76	$140.76	$140.76	$140.76
Commercial							
85 HCF	$106.10	$106.10	$159.04	$159.04	$159.04	$159.04	$159.04
133 HCF	$161.03	$161.03	$241.38	$241.38	$241.38	$241.38	$241.38
1000 HCF	$1,123.40	$1,123.40	$1,683.98	$1,683.98	$1,683.98	$1,683.98	$1,683.98
2000 HCF	$2,233.40	$2,233.40	$3,347.87	$3,347.87	$3,347.87	$3,347.87	$3,347.87

File = HELRM3B

File Date: 16-May-86

ALTERNATIVE 3B - REVENUE BOND WITH GRANTS - ONE RATE INCREASE

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$11,594,633	$7,688,160	$4,865,877	$5,019,716
User Charge Revenues	$2,243,746	$2,161,214	$3,274,887	$3,310,114	$3,345,342	$3,380,569	$3,415,796
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$3,497,307	$3,532,534	$3,567,762	$3,602,989	$3,638,216
Interest Income 7.0%	$177,882	$241,667	$216,446	$887,158	$612,564	$417,336	$427,659
Bond Proceeds	$1,496,568	$0	$10,155,688	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$450,000	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$16,316,006	$16,014,326	$11,868,485	$8,886,202	$9,085,591
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$364,671	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$536,581	$1,073,161	$1,073,161	$1,073,161
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,721,373	$8,326,166	$7,002,608	$3,866,487	$3,915,391
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$11,594,633	$7,688,160	$4,865,877	$5,019,716	$5,170,199
Revenue Bond Account	$506,000	$506,000	$1,551,000	$1,551,000	$1,551,000	$1,551,000	$1,551,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$491,233	$496,517	$501,801	$507,085	$512,369
Cash For Bond Payment	$154,962	$177,148	$165,318	$267,333	$370,499	$371,127	$371,303
Available Reserve	$362,376	$158,255	$1,128,435	$2,150,775	$2,322,388	$2,472,933	$2,613,959
Total Requirements	$6,841,088	$5,663,886	$16,316,006	$16,014,326	$11,868,485	$8,886,202	$9,085,591

File = HELRM3B

Alternative 4B

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan Assumptions Issue Year 1987 Term...... 20 Interest Rate (%) 8.50% Discount Percent 3.00% Selling Costs $2,000

Estimated Annual New Debt Service............ $1,058,138 Bond Issue Size....... $10,013,518 Debt Reserve 5.15% Bond Proceeds $9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$529,069	$1,058,138	$1,058,138	$1,058,138

File Date: 16-May-86 ALTERNATIVE 4B - STATE LOAN - NO SUBSIDY - ONE RATE INCREASE

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Interim Financing	$0	$0	$93,446	$83,446	$0	$0	$0
New Debt Service	$0	$0	$0	$529,069	$1,058,138	$1,058,138	$1,058,138
Bond Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,752,554	$8,402,100	$6,987,584	$3,851,463	$3,900,368
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$217,440	$846,586	$565,856	$370,453	$380,608
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,514,249	$6,110,797	$3,896,276	$592,873	$603,028
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,238,305	$2,291,303	$3,091,308	$3,258,591	$3,297,340
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$3,303,288	$3,338,821	$3,374,354	$3,409,887	$3,445,419
Surplus/Deficit(-)	$747	$24,122	$1,064,983	$1,047,518	$283,046	$151,296	$148,079
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$11,000,677	$7,006,404	$4,181,450	$4,332,746	$4,480,825
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	2.41	1.47	1.31	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	51.200%	0.000%	0.000%	0.000%	0.000%

File Date: 16-May-86 ALTERNATIVE 4B - STATE LOAN - NO SUBSIDY - ONE RATE INCREASE

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$12.85	$12.85	$12.85	$12.85	$12.85
1"	$18.70	$18.70	$28.27	$28.27	$28.27	$28.27	$28.27
1-1/2"	$24.36	$24.36	$36.83	$36.83	$36.83	$36.83	$36.83
2"	$31.17	$31.17	$47.13	$47.13	$47.13	$47.13	$47.13
3"	$69.70	$69.70	$105.39	$105.39	$105.39	$105.39	$105.39
4"	$108.23	$108.23	$163.64	$163.64	$163.64	$163.64	$163.64
6"	$108.23	$108.23	$163.64	$163.64	$163.64	$163.64	$163.64
8"	$108.23	$108.23	$163.64	$163.64	$163.64	$163.64	$163.64
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$12.85	$12.85	$12.85	$12.85	$12.85
2 Next 95 HCF	$1.22	$1.22	$1.84	$1.84	$1.84	$1.84	$1.84
3 All Additional	$1.11	$1.11	$1.68	$1.68	$1.68	$1.68	$1.68
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$6.49	$6.49	$6.49	$6.49	$6.49
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$12.85	$12.85	$12.85	$12.85	$12.85
21 HCF	$28.02	$28.02	$42.37	$42.37	$42.37	$42.37	$42.37
75 HCF	$93.90	$93.90	$141.98	$141.98	$141.98	$141.98	$141.98
Commercial							
85 HCF	$106.10	$106.10	$160.42	$160.42	$160.42	$160.42	$160.42
133 HCF	$161.03	$161.03	$243.48	$243.48	$243.48	$243.48	$243.48
1000 HCF	$1,123.40	$1,123.40	$1,698.58	$1,698.58	$1,698.58	$1,698.58	$1,698.58
2000 HCF	$2,233.40	$2,233.40	$3,376.90	$3,376.90	$3,376.90	$3,376.90	$3,376.90

File = HELRM4B

File Date: 16-May-86

ALTERNATIVE 4B - STATE LOAN - NO SUBSIDY - ONE RATE INCREASE

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources		Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance		$2,096,760	$2,943,075	$1,996,565	$11,000,677	$7,006,404	$4,181,450	$4,332,746
User Charge Revenues		$2,243,746	$2,161,214	$3,303,288	$3,338,821	$3,374,354	$3,409,887	$3,445,419
Fire Hydrant Charges		$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges		$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting		$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges		$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues		$2,346,509	$2,279,144	$3,525,708	$3,561,241	$3,596,774	$3,632,307	$3,667,839
Interest Income	7.0%	$177,882	$241,667	$217,440	$846,586	$565,856	$370,453	$380,608
Bond Proceeds		$1,496,568	$0	$10,013,518	$0	$0	$0	$0
Refunding		$559,156	$0	$0	$0	$0	$0	$0
Grants		$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds		$164,213	$0	$0	$0	$0	$0	$0
Total Resources		$6,841,088	$5,463,886	$15,753,231	$15,408,504	$11,169,034	$8,184,209	$8,381,193
Requirements								
Operation and Maintenance		$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing		$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs		$0	$0	$302,406	$0	$0	$0	$0
Debt Service New		$0	$0	$0	$529,069	$1,058,138	$1,058,138	$1,058,138
Interim Financing		$0	$0	$93,446	$83,446	$0	$0	$0
Capital Expenditures		$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal		$3,327,816	$3,467,320	$4,752,554	$8,402,100	$6,987,584	$3,851,463	$3,900,368
Transfers To Construction		$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds		$16,771	$0	$0	$0	$0	$0	$0
Ending Balance		$2,943,075	$1,996,565	$11,000,677	$7,006,404	$4,181,450	$4,332,746	$4,480,825
Revenue Bond Account		$506,000	$506,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000
Construction Account		$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve		$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable		$337,092	$324,182	$495,493	$500,823	$506,153	$511,483	$516,813
Cash For Bond Payment		$154,962	$177,148	$165,318	$265,904	$367,641	$368,269	$368,445
Available Reserve		$362,376	$158,255	$1,060,219	$1,996,142	$2,166,466	$2,314,423	$2,452,998
Total Requirements		$6,841,088	$5,663,886	$15,753,231	$15,408,504	$11,169,034	$8,184,209	$8,381,193

File = HELRM4B

Alternative 5B

File Date: 16-May-86 ALTERNATIVE 5B - SUBSIDIZED DNRC LOAN - ONE RATE INCREASE

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
Chessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
Other CIP - SDC Funds	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
CIP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
LESS:							
Sources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
EQUALS:							
CIP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

1st Bond/Loan	Issue Year	1987	Interest		Discount		Selling	
Assumptions	Term......	20	Rate (%)	6.50%	Percent	3.00%	Costs	$2,000
Estimated Annual			Bond Issue		Debt		Bond	
New Debt Service............		$908,791	Size......	$10,013,518	Reserve	5.15%	Proceeds	$9,195,838

	1985	1986	1987	1988	1989	1990	1991
Annual New Debt Service	$0	$0	$0	$454,395	$908,791	$908,791	$908,791

File = HELRM5B

File Date: 16-May-86 ALTERNATIVE 5B - SUBSIDIZED DNRC LOAN - ONE RATE INCREASE

Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Interim Financing	$0	$0	$93,446	$83,446	$0	$0	$0
New Debt Service	$0	$0	$0	$454,395	$908,791	$908,791	$908,791
Bond Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,752,554	$8,327,427	$6,838,237	$3,702,116	$3,751,021
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$302,406	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$212,087	$830,096	$542,561	$344,988	$352,707
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,508,897	$6,094,307	$3,872,981	$567,408	$575,127
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,243,658	$2,233,119	$2,965,256	$3,134,707	$3,175,893
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$3,150,358	$3,184,246	$3,218,134	$3,252,022	$3,285,909
Surplus/Deficit(-)	$747	$24,122	$906,701	$951,127	$252,878	$117,314	$110,016
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$10,842,394	$6,751,730	$3,896,608	$4,013,922	$4,123,938
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	2.25	1.49	1.32	1.25	1.25
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	44.200%	0.000%	0.000%	0.000%	0.000%

File = HELRM5B

File Date: 16-May-86 ALTERNATIVE 5B - SUBSIDIZED DNRC LOAN - ONE RATE INCREASE

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$12.26	$12.26	$12.26	$12.26	$12.26
1"	$18.70	$18.70	$26.97	$26.97	$26.97	$26.97	$26.97
1-1/2"	$24.36	$24.36	$35.13	$35.13	$35.13	$35.13	$35.13
2"	$31.17	$31.17	$44.95	$44.95	$44.95	$44.95	$44.95
3"	$69.70	$69.70	$100.51	$100.51	$100.51	$100.51	$100.51
4"	$108.23	$108.23	$156.07	$156.07	$156.07	$156.07	$156.07
6"	$108.23	$108.23	$156.07	$156.07	$156.07	$156.07	$156.07
8"	$108.23	$108.23	$156.07	$156.07	$156.07	$156.07	$156.07
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$12.26	$12.26	$12.26	$12.26	$12.26
2 Next 95 HCF	$1.22	$1.22	$1.76	$1.76	$1.76	$1.76	$1.76
3 All Additional	$1.11	$1.11	$1.60	$1.60	$1.60	$1.60	$1.60
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$6.19	$6.19	$6.19	$6.19	$6.19
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$12.26	$12.26	$12.26	$12.26	$12.26
21 HCF	$28.02	$28.02	$40.40	$40.40	$40.40	$40.40	$40.40
75 HCF	$93.90	$93.90	$135.40	$135.40	$135.40	$135.40	$135.40
Commercial							
85 HCF	$106.10	$106.10	$153.00	$153.00	$153.00	$153.00	$153.00
133 HCF	$161.03	$161.03	$232.21	$232.21	$232.21	$232.21	$232.21
1000 HCF	$1,123.40	$1,123.40	$1,619.94	$1,619.94	$1,619.94	$1,619.94	$1,619.94
2000 HCF	$2,233.40	$2,233.40	$3,220.56	$3,220.56	$3,220.56	$3,220.56	$3,220.56

File = HELRM5B

File Date: 16-May-86

ALTERNATIVE 5B - SUBSIDIZED DNRC LOAN - ONE RATE INCREASE

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$10,842,394	$6,751,730	$3,896,608	$4,013,922
User Charge Revenues	$2,243,746	$2,161,214	$3,150,358	$3,184,246	$3,218,134	$3,252,022	$3,285,909
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$3,372,778	$3,406,666	$3,440,554	$3,474,442	$3,508,329
Interest Income 7.0%	$177,882	$241,667	$212,087	$830,096	$542,561	$344,988	$352,707
Bond Proceeds	$1,496,568	$0	$10,013,518	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$15,594,949	$15,079,157	$10,734,845	$7,716,038	$7,874,959
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$302,406	$0	$0	$0	$0
Interim Financing	$0	$0	$93,446	$83,446	$0	$0	$0
Debt Service New	$0	$0	$0	$454,395	$908,791	$908,791	$908,791
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,752,554	$8,327,427	$6,838,237	$3,702,116	$3,751,021
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$10,842,394	$6,751,730	$3,896,608	$4,013,922	$4,123,938
Revenue Bond Account	$506,000	$506,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000	$1,021,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$472,554	$477,637	$482,720	$487,803	$492,886
Cash For Bond Payment	$154,962	$177,148	$165,318	$251,701	$339,234	$339,862	$340,038
Available Reserve	$362,376	$158,255	$924,876	$1,778,858	$1,933,465	$2,047,687	$2,148,445
Total Requirements	$6,841,088	$5,663,886	$15,594,949	$15,079,157	$10,734,845	$7,716,038	$7,874,959

File = HELRM5B

Alternative 6B

File Date: 16-May-86 ALTERNATIVE 6B - G. O. BOND - ONE RATE INCREASE

Table 6
City of Helena
Planned Rehabilitation, Replacement, and
Capital Improvements (CIP)
Fiscal Years Ending June 30th

Project Name/Item	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Tenmile Treatment Plant							
Engineering	$0	$58,500	$292,500	$187,000	$187,000	$0	$0
Construction	$0	$0	$0	$2,921,000	$2,921,000	$0	$0
Legal/Administrative	$0	$29,167	$145,833	$0	$0	$0	$0
Transmission Pipeline							
Engineering	$0	$22,600	$115,400	$50,000	$0	$0	$0
Construction	$0	$0	$629,000	$1,258,000	$0	$0	$0
Legal/Administrative	$0	$9,500	$47,500	$0	$0	$0	$0
Pipeline Corrosion Protection							
Engineering	$0	$2,284	$11,663	$5,053	$0	$0	$0
Construction	$0	$0	$27,433	$54,867	$0	$0	$0
Legal/Administrative	$0	$417	$2,083	$0	$0	$0	$0
hessman Dam Repairs							
Engineering	$0	$13,534	$69,105	$29,942	$0	$0	$0
Construction	$0	$0	$267,965	$535,929	$0	$0	$0
Legal/Administrative	$0	$4,600	$22,900	$0	$0	$0	$0
Replacement and Depreciation	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000
Other CIP	$0	$830,031	$140,601	$0	$0	$0	$0
ther CIP	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
IP-Total	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
ESS:							
ources of Funding							
Other Than Rates							
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Construction Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
System Development Fees	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Other Funding	$0	$970,632	$1,876,474	$5,146,281	$3,212,490	$104,490	$104,490
QUALS:							
IP Funded Directly by Water Rate Revenues	$245,219	$304,819	$304,819	$400,000	$400,000	$400,000	$400,000

st Bond/Loan Issue Year 1987 Interest Discount Selling
ssumptions Term...... 20 Rate (%) 7.50% Percent 3.00% Costs $70,000

stimated Annual Bond Issue Debt Bond
ew Debt Service............ $989,510 Size....... $10,087,548 Reserve 5.15% Proceeds $9,195,838

	1985	1986	1987	1988	1989	1990	1991
nnual New Debt Service	$0	$0	$0	$494,755	$989,510	$989,510	$989,510

ile = HELRM6B

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Table 7
City of Helena
Forecast System Annual Cost and
Revenues Required From Rates
Fiscal Years Ending June 30th

Revenue Requirements	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Water Accounting	$100,941	$115,046	$118,497	$122,052	$125,714	$129,485	$133,370
Water M&O	$931,985	$1,145,490	$1,187,773	$1,252,362	$1,316,552	$1,281,360	$1,325,455
Old Debt Service	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
CIP Costs	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
New Debt Service	$0	$0	$0	$494,755	$989,510	$989,510	$989,510
Bond Selling Costs	$0	$0	$372,626	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Annual System Cost	$3,344,587	$3,467,320	$4,729,329	$8,284,340	$6,918,956	$3,782,835	$3,831,740
LESS: Other System Resources							
Constructn Account Funds Used	$0	$970,632	$1,771,984	$5,041,791	$3,108,000	$0	$0
Bond Proceeds - Selling Costs	$0	$0	$372,626	$0	$0	$0	$0
Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Miscellaneous Sales	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Wastewater Accting Charge	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
Net Refunding	$5,730	$0	$0	$0	$0	$0	$0
System Development Income	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Interest Income	$177,882	$241,667	$211,399	$834,784	$549,195	$345,022	$345,665
Water Funds Used	$651,000	$0	$0	$0	$0	$0	$0
Federal Grant	$0	$0	$0	$0	$0	$0	$0
State Grant	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Other Resources	$1,101,588	$1,330,229	$2,578,429	$6,098,995	$3,879,615	$567,442	$568,085
EQUALS: Required Revenues from Retail Rates	$2,242,999	$2,137,092	$2,150,900	$2,185,345	$3,039,341	$3,215,392	$3,263,655
Forecast Revenues Using Existing/Planned Rates	$2,243,746	$2,161,214	$3,130,696	$3,164,372	$3,198,048	$3,231,725	$3,265,401
Surplus/Deficit(-)	$747	$24,122	$979,796	$979,027	$158,707	$16,332	$1,746
Cumulative Surplus (if any)	$2,943,075	$1,996,565	$10,919,299	$6,856,535	$3,907,243	$3,923,575	$3,925,321
Required Percentage Increase Over Existing/Planned Rates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coverage Under Existing/ Planned Rates		1.25	2.23	2.82	2.50	2.36	2.35
Required Percentage Increase To Meet Coverage		0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Planned Percentage Increase	------	0.000%	43.300%	0.000%	0.000%	0.000%	0.000%

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File Date: 16-May-86 ALTERNATIVE 6B - G. O. BOND - ONE RATE INCREASE

Table 8
City of Helena
Forecast Rates and
Estimated Typical Bimonthly Bills
Fiscal Years Ending June 30th

Customer Class	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Minimum Charge							
Meter Size							
5/8 & 3/4"	$8.50	$8.50	$12.18	$12.18	$12.18	$12.18	$12.18
1"	$18.70	$18.70	$26.80	$26.80	$26.80	$26.80	$26.80
1-1/2"	$24.36	$24.36	$34.91	$34.91	$34.91	$34.91	$34.91
2"	$31.17	$31.17	$44.67	$44.67	$44.67	$44.67	$44.67
3"	$69.70	$69.70	$99.88	$99.88	$99.88	$99.88	$99.88
4"	$108.23	$108.23	$155.09	$155.09	$155.09	$155.09	$155.09
6"	$108.23	$108.23	$155.09	$155.09	$155.09	$155.09	$155.09
8"	$108.23	$108.23	$155.09	$155.09	$155.09	$155.09	$155.09
Volume Charge							
Block							
1 0-5 HCF	$8.50	$8.50	$12.18	$12.18	$12.18	$12.18	$12.18
2 Next 95 HCF	$1.22	$1.22	$1.75	$1.75	$1.75	$1.75	$1.75
3 All Additional	$1.11	$1.11	$1.59	$1.59	$1.59	$1.59	$1.59
Fire Hydrant BiMonthly Charge	$4.29	$4.29	$6.15	$6.15	$6.15	$6.15	$6.15
Estimated Typical Bimonthly Bills							
Residential							
Minimum	$8.50	$8.50	$12.18	$12.18	$12.18	$12.18	$12.18
21 HCF	$28.02	$28.02	$40.15	$40.15	$40.15	$40.15	$40.15
75 HCF	$93.90	$93.90	$134.56	$134.56	$134.56	$134.56	$134.56
Commercial							
85 HCF	$106.10	$106.10	$152.04	$152.04	$152.04	$152.04	$152.04
133 HCF	$161.03	$161.03	$230.76	$230.76	$230.76	$230.76	$230.76
1000 HCF	$1,123.40	$1,123.40	$1,609.83	$1,609.83	$1,609.83	$1,609.83	$1,609.83
2000 HCF	$2,233.40	$2,233.40	$3,200.46	$3,200.46	$3,200.46	$3,200.46	$3,200.46

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ALTERNATIVE 6B - G. O. BOND - ONE RATE INCREASE

Table 9
City of Helena
Projected Sources and Uses of Funds
Fiscal Years Ending June 30th

Resources	Actual 1985	Current 1986	1987	1988	1989	1990	1991
Beginning Fund Balance	$2,096,760	$2,943,075	$1,996,565	$10,919,299	$6,856,535	$3,907,243	$3,923,575
User Charge Revenues	$2,243,746	$2,161,214	$3,130,696	$3,164,372	$3,198,048	$3,231,725	$3,265,401
Fire Hydrant Charges	$22,597	$24,807	$24,807	$24,807	$24,807	$24,807	$24,807
Misc. Sales & Charges	$24,514	$37,300	$37,300	$37,300	$37,300	$37,300	$37,300
Sewer Accounting	$55,652	$55,823	$55,823	$55,823	$55,823	$55,823	$55,823
System Development Charges	$0	$0	$104,490	$104,490	$104,490	$104,490	$104,490
Subtotal Operating Revenues	$2,346,509	$2,279,144	$3,353,116	$3,386,792	$3,420,468	$3,454,145	$3,487,821
Interest Income 7.0%	$177,882	$241,667	$211,399	$834,784	$549,195	$345,022	$345,665
Bond Proceeds	$1,496,568	$0	$10,087,548	$0	$0	$0	$0
Refunding	$559,156	$0	$0	$0	$0	$0	$0
Grants	$0	$0	$0	$0	$0	$0	$0
Transfer From Other Funds	$164,213	$0	$0	$0	$0	$0	$0
Total Resources	$6,841,088	$5,463,886	$15,648,628	$15,140,876	$10,826,198	$7,706,410	$7,757,061
Requirements							
Operation and Maintenance	$1,032,926	$1,260,536	$1,306,270	$1,374,415	$1,442,266	$1,410,845	$1,458,825
Debt Service Existing	$2,049,671	$931,333	$869,140	$868,890	$874,690	$877,990	$878,915
Bond Sale Costs	$0	$0	$372,626	$0	$0	$0	$0
Debt Service New	$0	$0	$0	$494,755	$989,510	$989,510	$989,510
Capital Expenditures	$245,219	$1,275,451	$2,181,293	$5,546,281	$3,612,490	$504,490	$504,490
Subtotal	$3,327,816	$3,467,320	$4,729,329	$8,284,340	$6,918,956	$3,782,835	$3,831,740
Transfers To Construction	$553,426	$200,000	$0	$0	$0	$0	$0
Transfers To Other Funds	$16,771	$0	$0	$0	$0	$0	$0
Ending Balance	$2,943,075	$1,996,565	$10,919,299	$6,856,535	$3,907,243	$3,923,575	$3,925,321
Revenue Bond Account	$506,000	$506,000	$1,025,000	$1,025,000	$1,025,000	$1,025,000	$1,025,000
Construction Account	$1,496,568	$725,936	$8,149,791	$3,108,000	($0)	($0)	($0)
Working Capital Reserve	$86,077	$105,045	$108,856	$114,535	$120,189	$117,570	$121,569
Accounts Receivable	$337,092	$324,182	$469,604	$474,656	$479,707	$484,759	$489,810
Cash For Bond Payment	$154,962	$177,148	$165,318	$259,378	$354,588	$355,215	$355,391
Available Reserve	$362,376	$158,255	$1,000,730	$1,874,967	$1,927,759	$1,941,030	$1,933,551
Total Requirements	$6,841,088	$5,663,886	$15,648,628	$15,140,876	$10,826,198	$7,706,410	$7,757,061

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